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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

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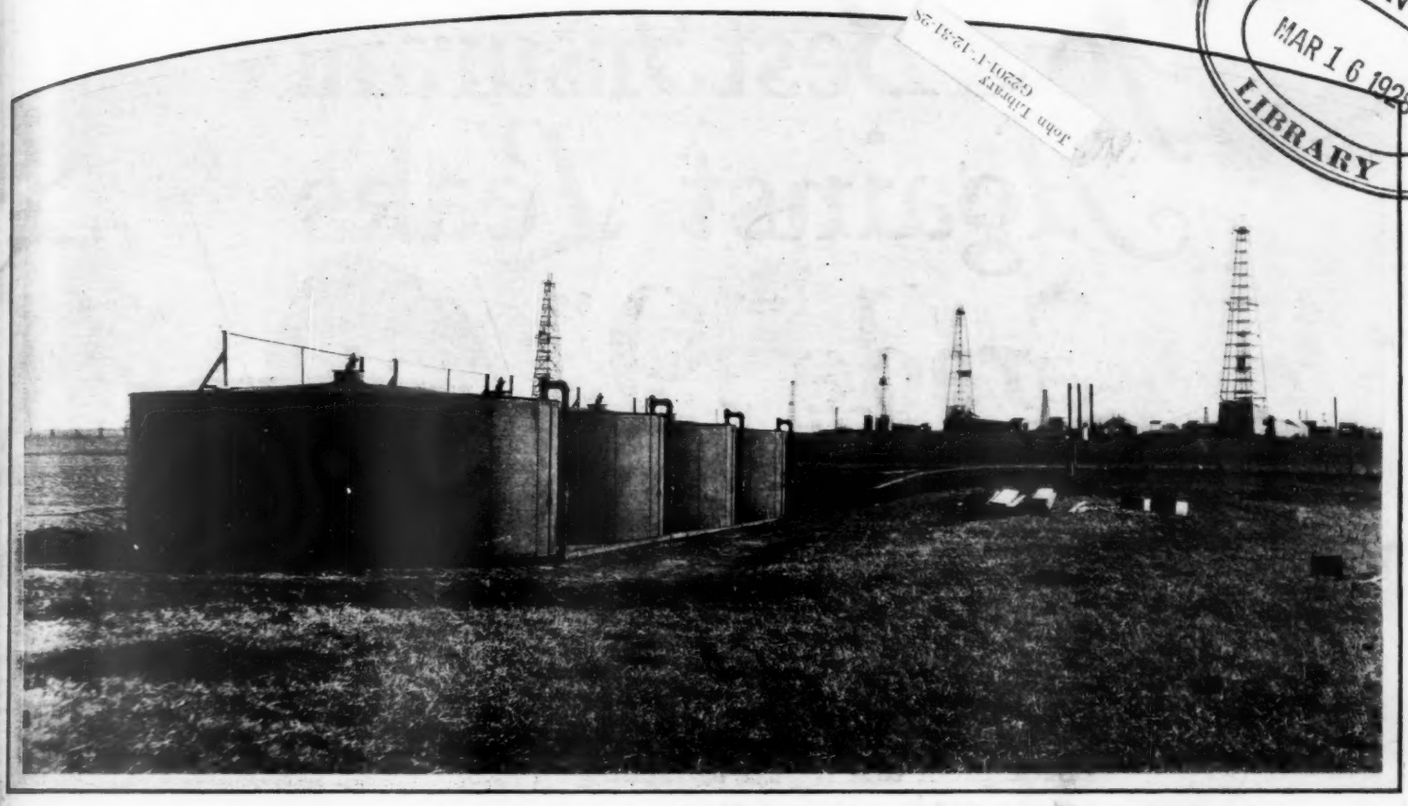

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PRODUCING REFINING MARKETING

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Curtailment Plans Again Dominant

Highest daily average estimated total production in 1927, week ended July 30, 2,587,105 bbls. Lowest in 1927, Jan. 22, 2,360,789 bbls.

Much Depends on Success of Present Movements. Situation Regarding "Sweet" Oils Is Improving.

By Andrew M. Rowley

Highest daily average estimated light oil production in 1927, week ended July 30, 2,102,385 bbls. Lowest in 1927, Jan. 1, 1,790,729 bbls.

Developments in the petroleum industry, having a vital influence on the situation this year, are shaping themselves rapidly to a point where it will be possible to gauge more accurately what may be expected during the next few months at least. Of paramount importance are the movements to curtail production. It is conceded the success of such efforts in the greater Seminole area in Oklahoma prevented a wild orgy of drilling and the further flooding of an already surfeited crude market. Much now depends on the endeavor to reach a satisfactory agreement regarding the situation in the Hendricks Pool, Winkler County, Texas, and in the success of the movement already started in California to shut in light and heavy oil production totaling between 50,000 and 65,000 bbls.

The Hendricks Pool, referred to as the "biggest thing outdoors," was making 187,615 bbls. a day early this week, an increase of 64,762 bbls. over the daily average of a week ago, and 17,823 bbls. more than the daily average for last week. While water encroachment was worrying operators, many believe this condition actually will result in a greater ultimate yield than if the propulsive force of the crude were gas. This pool has not as yet been defined and its potentialities are enormous.

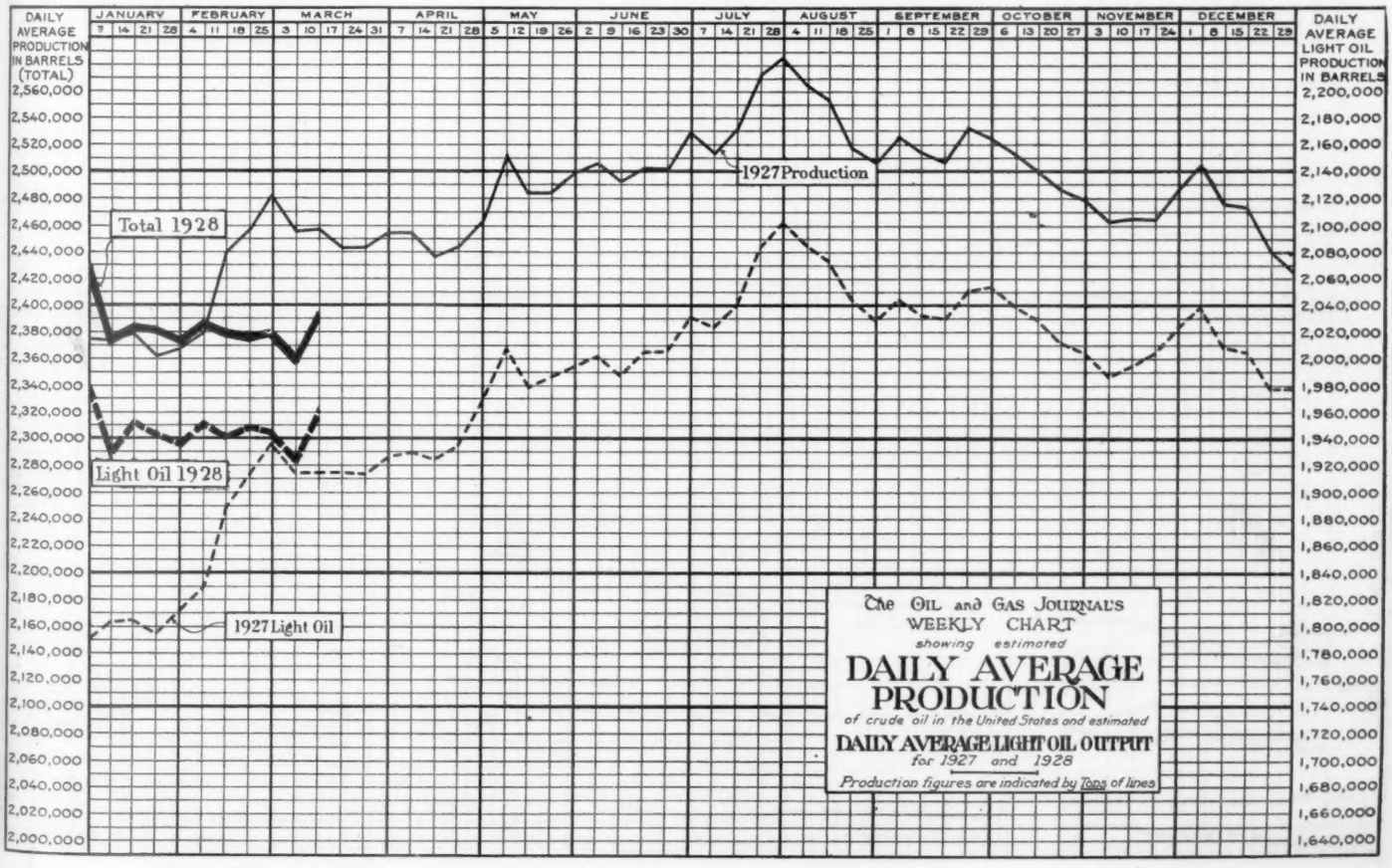
While the output of West Texas is showing big increases, production of light gravity "sweet" oil, or that grade without any sulphur content, is continuing to decline and will do so until early summer at least. Many companies in the Oklahoma-Kansas-North Texas section of the Mid-Continent area are withdrawing crude from storage. The demand for high gravity "sweet" oil is increasing and all indications point to a good market for this grade of oil. It is realized operators will not prospect extensively for "sweet" oil under present prices and it is felt higher prices for this grade will be announced when the spring demand gets under way fully. While higher prices seem to be assured for "sweet" oil, statements are made crude from some West Texas fields is being offered at material reductions from the posted prices.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended March 10, and a comparison with the previous week follows:

	Mar. 10		Mar. 3	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	14,865	.....	15,260	.....
Burbank	43,860	.....	44,445	.....
Other Osage Fields	30,680	.....	29,415	.....
Cushing and Shamrock	21,115	.....	21,130	.....
Bristow	24,790	.....	24,870	.....
Seminole	304,210	.....	305,360	.....
Northern Miscellaneous	156,190	.....	154,285	.....
Southern Fields	57,685	.....	59,170	.....
Total Oklahoma	653,395	.....	653,935	.....
West Texas—				
Hendricks	169,693	.....	122,754	.....
Yates	45,037	.....	47,548	.....
Remainder	120,720	.....	123,578	.....
Total West Texas	335,450	.....	293,880	.....
North Louisiana	36,860	8,025	37,480	7,820
Arkansas	19,785	66,545	19,785	66,940
North Central Texas	128,151	.....	128,442	.....
Texas Panhandle	71,710	.....	72,625	.....
East Central Texas	24,603	.....	24,798	.....
Kansas	113,235	.....	112,710	.....
Total Mid-Continent Area	1,383,189	74,570	1,343,655	74,760
Gulf Coast	.....	116,337	.....	119,535
Southwest Texas	.....	27,279	.....	27,131
Eastern	104,000	.....	104,000	.....
Rocky Mountain Area	77,311	.....	77,558	.....
California—				
Santa Fe Springs	38,250	.....	38,250	.....
Long Beach	119,500	.....	120,000	.....
Torrance	2,000	17,000	2,250	17,000
Huntington Beach	57,750	.....	58,000	.....
Dominguez	12,500	.....	12,500	.....
Inglewood	19,000	12,000	19,000	12,000
Ventura Avenue	52,000	.....	53,000	.....
Seal Beach	39,500	.....	40,000	.....
Remainder of State	59,500	185,000	59,500	185,000
Total California	400,000	214,000	402,500	214,000
Total United States	1,964,500	432,186	1,927,713	435,426
Grand Total		2,396,686		2,363,139

→ **Total Increase, 33,547 Bbls.; Light Oil Increase, 36,787 Bbls.** ←



Optimism Continuing in Group 3

Gasoline and Kerosene Stronger. Natural Gasoline Weaker as Demand Fails to Move Production. Fuel Oils Strong but Future Uncertain

By W. T. Ziegenhain

Optimism regarding the immediate future of Oklahoma refined oil prices is quite apparent among sales managers, but most agree that prices cannot be expected to go more than fractionally higher until a general crude price advance is made. The demand for gasoline has been exceptionally good, and, while there is plenty of material available, the market is in a fair position to continue to advance slowly. Kerosene demands have increased from the agricultural regions and prices were generally higher. Fuel oils continue strong. Distillates no longer hold a very important position in the refined oil market and the small amount of material sold usually goes at prices below the market over the past month. Zero cold test gas oils were in more demand than a week ago, but in general the entire low cold test gas oil and fuel oil market has fallen off. Lubricants continue to be weak. The demand has been somewhat uniform throughout the winter, but stocks have been built up and while an increasing demand will develop as we enter the summer months a crude advance is thought necessary to boost prices materially. Cylinder stocks are very weak, and, except for the export demand, which relieves stocks from time to time, prices would probably fall to a much lower level. Wax is fairly strong at the higher prices, but resistance is being encountered and there is less thought of attempting to continue to advance the price just at this time.

Natural Gasolines

Natural gasolines were very weak and many of the manufacturers expressed the thought that March will continue as a poor month from the standpoint of prices. Production continues at a high rate, particularly in the Seminole Field, and the demand has not developed sufficiently to allow manufacturers to move production readily. Stocks have been built up in anticipation of a better demand and better prices, but these stocks are proving to be little needed as the immediate future appears now. The production in the Seminole Field has been averaging consistently in slight excess of 100 cars daily for the past two months and manufacturers constantly revise their estimates upward in figuring the future life and productivity of that field.

While it is true that many new gas lines have had to be laid to the more remote sections of the field in order to maintain production at the capacity of the plants, the old connections are improving in the amount of natural gasoline per 1,000 cubic feet of gas run and it is common to get 4 gallons per 1,000 and in some cases has gone up to 6 gallons. Operators feel confident that the natural gasoline production will be maintained above 75 cars per day throughout this year, even though no new extensive fields are found Improvements in operation will be responsible for a great share of being able to maintain a high production, it was said, and with these predictions being made manufacturers see the possibility of another year of low prices ahead and are seeking methods of increasing the demand rather than waiting for production to fall off.

Gasolines and Naphthas

The demand for the U. S. Motor grade was good considering it is but the early part of March. Ordinarily, March is a dull month from the standpoint of consumption, but the favorable weather throughout the Group 3 marketing area has given the gasoline market greater activity. There is very little export buying and this is sometimes looked at as meaning a lack of confidence exists regarding continued advance of the market. A small amount of 60-62 390 endpoint gasoline was taken out of North

(Continued on Page 159)

REFINED MARKET BAROMETER

Prices on refined products showed a general improvement in all refining sections as the demand was increased above what might be expected this early in the year. The advances were small but gasoline is in a good position to continue to advance as the demand increases. Natural gasoline was weaker in the Mid-Continent as production exceeded the demand and forced additions to be made to stocks. Naturals were stronger in California Kerosene demands increased in the Mid-Continent and were unchanged in other sections. Gas oil and fuels were unchanged. Lubs moved slowly in all sections except in the Gulf Coast area, where the market has been given renewed activity due to the large export shipments. Wax was strong but resistance to high prices was being felt.

Mid-Continent—Gasoline and kerosene demands increased, allowing fractional advances in price. Natural gasolines weakened and the outlook for the balance of the month is not viewed with optimism. Fuels were strong due to industrial demands.

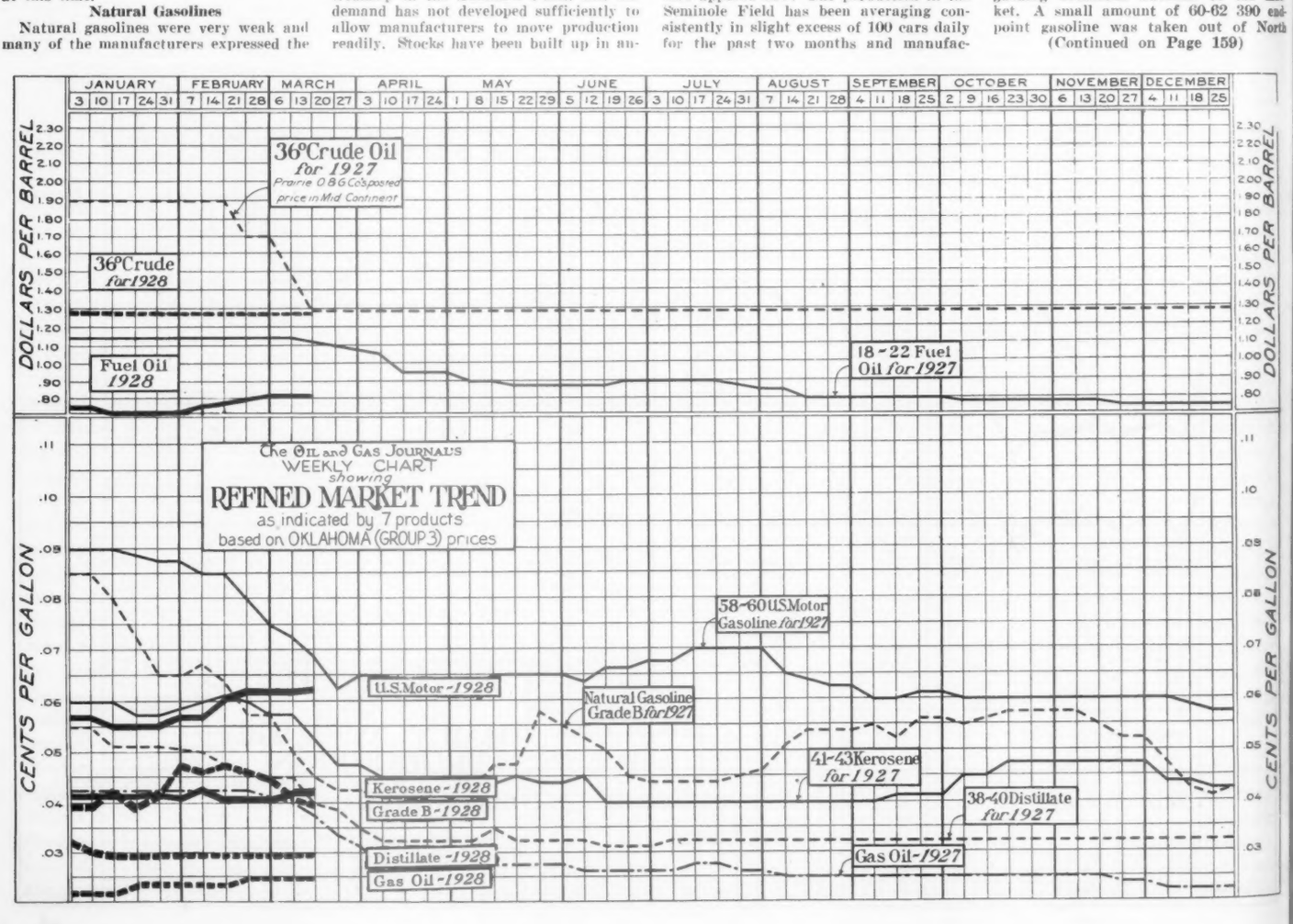
Atlantic Seaboard—Gasoline in cases for export was advanced one-quarter cent and the general market is in a better position to advance. Even the fuel oil market has shown firmness and is attributed to the better demand or bunker fuel.

Pennsylvania—Gasoline and kerosene prices strengthened and lubricants remained in a strong position to advance as consumption is increased.

Gulf Coast—Exports of large quantities of several grades of lubricants strengthened the general market.

Chicago—Increased consumption as a result of moderate weather is giving the market considerable activity and prices are generally above those of a week ago. Gasoline and kerosene are particularly strong.

California—The market was generally unchanged from the standpoint of prices, but the demand has increased, creating optimism as to the future. Natural gasolines were quoted higher.



Proration Plan for Hendricks Field

State Railroad Commission Asked to Appoint Committee of Six Operators to Cope With Winkler County Situation

By James H. Dameron

Addresses of W. S. Farish and W. B. Hamilton will be found on pages 155 and 156 respectively.

FORT WORTH, Tex., Mar. 12.—Two developments of importance were uppermost in the thoughts of Texas operators as the result of the open hearing held by the Texas Railroad Commission at Austin Saturday to consider conditions in the industry that existed in Texas. First was the possibility of a cut in West Texas crude and in particular a cut in Hendricks crude; the second was the probability of a proration agreement for that field which has assumed national importance to the crude market.

In the event a proration agreement is brought about it is generally conceded the crude cut would be remote at the present. It is the opinion of several close observers that a protation agreement will be worked out for the Winkler County Field, although there is prevalent a wide difference of opinion on the point. But many operators who have attended all of the meetings anent the Seminole restriction plan as well as the Yates restriction agreement, opine that more progress was made at the Austin meeting Saturday than was made in the initial meetings concerning the proration agreements affecting Seminole and Yates. Whether those observations can be relied upon as a criterion remains for time to tell.

Committee to Consider Plan

The meeting Saturday did advance to a position where the Railroad Commission was requested to appoint a committee of six oil operators to consider the feasibility of developing the Hendricks Field under a proration agreement. The seventh member of this committee is to be R. D. Parker, chief supervisor of the oil and gas division of the Texas Railroad Commission. The commission asked for time to appoint the six members of the committee in order to exercise the utmost care in the selection of the committee. Ed Landreth of the Landreth Production Co., Fort Worth, Tex., who several months ago urged a proration agreement for Hendricks, was suggested along with others by those attending the meeting for a seat in the committee.

Time, it was pointed out, was the essence of the Hendricks proposal, and it is believed that the committee will be appointed within a few days and start functioning. The situation in Winkler County is at a stage where it is admitted that it will be difficult to work out a proration agreement acceptable to all concerned in detail; but on the other hand, it is likewise admitted that a restrictive agreement is necessary, and one will probably be reached.

The resolution adopted at the meeting was one presented by W. B. Hamilton, Wichita Falls, Tex., independent producer, representing the West Texas Chamber of Commerce oil and gas division. Mr. Hamilton in an address reviewed the petroleum industry's past history and stressed the importance of controlling flush fields. His resolution, endorsed by the executive body he represented and also endorsed at the Austin meeting, is as follows:

Resolution Adopted

The Railroad Commission is charged with the responsibility of conserving and preventing waste of oil and gas.

1. There is a large overproduction of oil and gas in Winkler County, in the sense that much gas is going to waste in the air—400,000,000 to 600,000,000 feet per day—and that oil is being forced into storage, which involves great economic loss due to evaporation, fires, leaks, etc.

2. Great damage is being done, due to water intrusion.

(a) From edge or bottom water because of hasty drilling, the waste of gas volume and pressure.

(b) Due to present faulty methods of setting casing, the upper water horizons are not being properly sealed off and large volumes of upper water are entering the producing horizons in certain areas.

(c) Some 30 or 40 wells are showing water in this field. At the present time very little is known as to source of this water trouble. If this problem could be worked out, the drilling of numerous wells would probably be avoided with a corresponding saving to the industry.

3. Conservation of oil and gas—to the great benefit of the public, the operators and all concerned—can be had by a program of orderly conservative development.

4. That orderly development in Winkler County can be fully attained only if the incentive to unrestrained competition between individual operators in drilling of wells, and attempting to appropriate as large a share as possible of the total available market and transportation outlet of Winkler County crude, is removed.

5. This incentive can be removed, as it has been done in the case of the Yates Pool in Pecos County, if his proportionate share of the total market and transportation outlet for Winkler County crude is made available to every producer in the Winkler County Field on a fair and equitable basis.

6. This type of orderly development can best be brought about by a co-operative effort on the part of all concerned, viz., the government (Railroad Commission), the operators and the purchasing and transportation agencies.

7. Therefore, the Railroad Commission should issue a call for an open hearing to determine whether it ough to order the chief supervisor to appoint an umpire to be in authority in Winkler County to represent the Railroad Commission in order to bring about in the best manner possible orderly development which will eliminate the conditions now prevailing.

8. To this end the umpire is directed to work with the operators, or a committee of operators, to effect a proration agreement, to divide equally and reasonably the market and transportation outlet for Winkler County crude.

Discussion on Estimates

Among the imposing array of figures presented by Mr. Hamilton was an estimate of what West Texas could be producing wide open by June 30. He estimated that the entire West Texas area could be producing 1,500,000 bbls. daily by the end of the first half of the current year. The estimate was based upon the present number of producing wells with their maximum 24-hour gauge. Roundly, the number of producing wells was doubled with a similar increase in production less 40 per cent.

While his estimate was questioned slightly, it was generally accepted as being a sound estimate based upon the present performances of wells in West Texas. His address before the meeting is published elsewhere in this issue.

W. S. Farish, president of the Humble Oil & Refining Co., and one of the prime movers in the Yates Pool proration agreement, also estimated the potential production of West Texas could reach the staggering peak of 1,500,000 bbls. daily. He also estimated that the proven and semiproven acreage in Pecos, Winkler, Howard, Crane and Upton Counties was close to 100,000 acres with only part of it developed.

During his address he pointed out that the present market for West Texas crudes is around 220,000 bbls. daily. Of this amount, approximately 140,000 bbls. is being moved through oil trunk lines and 52,000 bbls. is being shipped out in tank cars, and the balance is being consumed by local refineries in West Texas. The remaining 80,000 bbls. of daily production is going to storage. Incidentally, it will not be amiss to mention that Hendricks reached a new peak during the past week when it soared to 168,000 bbls. daily.

Of more importance to the producer, however, is the Humble company's attiture concerning West Texas prices. West Texas crude is coming into direct competition with Venezuela crude. It is ad-

(Continued on Page 110)

Governors Pledge Co-Operation

Chief Executive of New Mexico Recommends Selection of Commission to Formulate Legislation

Co-operation of the governors of the oil-producing States with the Federal Oil Conservation Board in efforts to solve the overproduction problem, prevent waste and conserve petroleum seems assured from replies sent Hubert Work, chairman of the board, by governors who were asked to co-operate. The letter written by Mr. Work and sent to the Governors of 20 oil-producing States was published in The Oil and Gas Journal last week.

In a statement to The Oil and Gas Journal, Richard C. Dillon, governor of New Mexico, presents recommendations which he feels will aid in solving problems confronting the oil industry. The statement follows:

"New Mexico recognizes the importance and necessity of a constructive program for the conservation of her oil and gas resources and I suggest a commission composed of a representative of each of the oil-producing states to be appointed by the respective governors and of a representative of the Federal Government to be designated by the Federal Oil Conservation Board to meet and formulate legislation as follows:

"First, a uniform law to be adopted by each state covering the conservation of oil and gas in State-owned lands; second, Federal law for same purpose on public lands, Indian reservations and forest reserves; third, uniform State law to prevent waste of oil and particularly gas in connection with operations on privately owned land upon the theory that the police powers of the State can be invoked to prevent wastage of a resource which because of its importance to our civilization and to progress of humanity is one in which the public and people have such an interest as to make that interest paramount to the right of the private owner to destroy or waste his property or to permit his lessee to do the same.

"In general I concur in the recommendation of Committee of Nine but do not think they go far enough which is the explanation of my recommendations above.—Richard C. Dillon, Governor of New Mexico."

Letters From Governors

Among the letters sent to Mr. Work are as follows:

Alfred E. Smith, Governor of New York—"I have your letter of February 29 with reference to the report on national petroleum conditions, asking the co-operation of the State of New York in uniting on uniform State legislation for the conservation of petroleum resources.

"New York is not a large producer in this field, there being only a very limited amount of oil in the State and only in one comparatively small section. We are, however, in complete sympathy with the plan of your committee and will co-operate in every way possible on uniform state legislation."

C. C. Young, Governor of California—"I have at hand your report of the Federal Oil Conservation Board which I shall study with a great deal of interest as soon as I can get the time to do so.

"We have recently conducted a rather interesting experiment here in California when as a state administration we called together the various oil producers, acting upon the assumption that each of them would like to do away with waste, both of oil and gas, but that no one company cared to take the initiative in calling such a meeting.

"We then suggested that a production committee be appointed consisting of the field superintendent or production engineer of each of the large companies, and that this committee should form subcommittees to study each individual field, and in fact, each individual well of each field, with a view of curtailing production when such was obviously wasteful.

"This production committee is to make a report in two or three days, and I have been told that it will probably be of such a nature as will undoubtedly do away with a great deal of waste here in California. I am merely mentioning these facts to you in order that you may see that as a state we are doing all we can to co-operate with the Federal government in this direction."

A. V. Donahey, Governor of Ohio—"I have your letter and the report of the Committee of Nine with reference to uniform state legislation on the subject of petroleum conservation. You may be assured of my hearty approval of such a program and of my fullest co-operation. I shall be glad to hear from you further as steps develop."

Fred W. Green, Governor of Michigan, wrote The Oil and Gas Journal as follows:

"The State of Michigan is interested in proposals submitted by the Federal Oil Conservation Board. Our production is small at this time but believe a constructive program looking to prevention of waste should be adopted."

Motor Trip Advertising Takes Hold

D. E. Buchanan Shows How Much a Little Gain in Mileage Would Affect Surplus. Kansas Newspaper Uses the Suggestion Locally

The suggestion in The Oil and Gas Journal of March 1 that increased gasoline consumption could be promoted by effective advertising inducing motorists to wider use of their cars in week-end trips to attractive spots, much as the railroads attract travel by advertising resorts, has given the industry something new to think about.

D. E. Buchanan, vice president of the Chestnut & Smith Corp., was quick to see the importance of the suggestion. In a letter to The Oil and Gas Journal heartily endorsing the proposal he points out that an increase of 3 miles a day would mean an increase in gasoline consumption that within a year would use up the entire surplus now in storage.

The consumption of gasoline has become so vast and the number of cars so great that even the gasoline industry has not paused to consider the effect of even so slight an increase in car use in solving the problem of the whole oil industry.

But, as Mr. Buchanan says, it is not necessary or even desirable to wish for a gain in demand that would consume our entire surplus. The point is that any increase in gallonage through a concerted advertising campaign of the sort suggested would be a very material help at the present time.

While not, perhaps, measuring up to the full possibilities of the plan, the prompt use of the suggestion by an enterprising Kansas newspaper shows its instant appeal and effectiveness.

The proposed advertising should engage the best thought of oil company representatives aided by those competent in the preparation of attention-compelling and interest-holding illustrations and information.

The mere publication of routes and listing of points of interest, while an improvement and bound to lead to some gain in gallonage, will not be sufficient. It would be almost the same as the publication of a railroad timetable. The railroads have seen this and have made their advertising enticing, creating the wish in the reader to visit the spots described. This is the real motive in the suggestion that will alone lead to the results expected.

The concerted campaign by oil companies suggested in The Oil and Gas Journal is the really effective way to do it. The idea should not be allowed to pass out of control of the oil industry because unless rightly executed the full possibilities cannot be secured. The promptness with which the idea was seized by the Kansas publication proves how quickly and enthusiastically outsiders saw the point. Now that a beginning has been made it will be well for the industry to act immediately if it is to get the best results out of the suggestion.

The most efficient and effective plan would, of course, be the adoption of a national advertising campaign representing all the oil companies and under a united direction, thereby eliminating duplication and waste effort. But to wait for that to be arranged would be to miss the most promising season of the year, the opening of the period of heavier gasoline consumption when the roads are most inviting and the appeal would be most timely.

Without waiting for nation-wide action the oil companies in any center of population can get together immediately on a localized advertising campaign, covering week-end trips and nearby points of interest and beauty that may be reached in a spring or summer evening's ride.

Every additional gallon consumed in response to that invitation would be a clear gain to the whole industry and a dividend on the advertising program. The space now occupied with competitive advertising would make a good beginning if concentrated on a single advertisement large enough and attractive enough to compel the attention of every reader.

The Parsons Daily Republican

MURLIN AND MURLIN

THE ONLY MORNING PAPER IN LABETTE COUNTY
THE ONLY SUNDAY PAPER IN LABETTE COUNTY

Parsons, Kans., March 10, 1928.

The Oil and Gas Journal,
Tulsa, Okla.
Gentlemen:

Last week I read the article on page 89, "Increase Gallonage," in The Oil and Gas Journal. It registered a "bull's eye" with me.

Having been in the advertising game I saw the possibilities of a campaign with your idea of making the other fellow want to travel.

I made up a dummy of the enclosed page and sold it in one day. I also sold them on a follow-up "Trip" scheme for the following weeks. All of which makes money for the newspaper and gives the advertiser more for his money than any class of dope he can put to the automotive world.

I tried this stunt on the different lines of advertisers in the auto game. It was simply a matter of explaining it to them and the space was sold.

I have been in the newspaper game and know the conditions under which they work. They are grabbing hot ideas for advertising purposes. Any legitimate scheme that will sell space they will take to.

The selling possibilities of this proposition have many angles and the field is unlimited.

Your follow-up article in this week's paper is a fine selling talk for the trade. It's good.

Yours truly,
A. M. ROBERTSON,
1400 Main.

Chestnut & Smith Corporation

MANUFACTURERS OF
NATURAL GASOLINE
CHEYENNE AT SEVENTH

Tulsa, Okla., March 10, 1928.

Mr. Robert W. Egan, Vice President and General Manager.
The Oil and Gas Journal,
Tulsa, Okla.
Dear Sir:—

I want to heartily endorse Mr. Anderson's article in your March 1 issue entitled "How to Get More Gallonage." I believe it represents some very constructive thought.

On February 1 there were approximately 1,500,000,000 gallons of gasoline in storage. The Automotive Industry reports approximately 20,000,000 passenger cars registered at this time. The gasoline in storage, therefore, represents a reserve of 75 gallons per passenger car, with no consideration for trucks, etc. Assuming 15 miles per gallon for the average passenger automobile, the gasoline in storage per car represents about 1,125 miles of ordinary driving. From this we find that if gasoline production remained at present levels and every passenger car was driven slightly more than 3 extra miles per day this entire 1,500,000,000 gallons of gasoline, plus normal production would be used up before this time next year. Putting it another way; if every passenger automobile was driven 22 extra miles each week-end it would have the same effect, or if every passenger car was driven 94 extra miles one week-end each month the entire surplus would be used up in 12 months.

We, of course, do not want the entire surplus consumed and it will probably not come to pass for many, many years, but the above simple calculations surely indicate that there is every reason in the world to expect some improvement in the situation through a concerted advertising campaign such as Mr. Anderson suggests. I do not believe the industry at large realizes the relatively small amount of additional driving required to bring about a tremendous increase in consumption.

It would seem that we might well afford to get actively behind a "See America First" campaign.

Yours truly,
D. E. BUCHANAN,
Vice President.

CALIFORNIA OPERATORS START TO CURTAIL; GOAL 65,000 BBLS. DAILY

By L. P. Stockman

LOS ANGELES, Calif., Mar. 13.—The first definite move to eliminate excess production of natural gas in California has been undertaken by operators in the Ventura Avenue Field and while it will require several days to effect a restriction in production sufficient to offset the amount of natural gas which has been blowing off into the air because of inadequate pipe line facilities, the maximum curtailment should be attained within the next week at the most. Theoretically, it will be necessary to shut in approximately 12,000 bbls. per day of crude oil in order to eliminate the excess production of 65,000,000 feet of natural gas daily but this may vary one way or the other in actual practice.

Approximately 8,000 bbls. of daily crude oil production has already been shut in by the Associated, Shell, General Petroleum and Petroleum Securities and this will be increased day by day until all excess production of natural gas at Ventura Avenue has been entirely eliminated.

Although the curtailment in crude oil production at Ventura Avenue is a conservation measure instituted primarily to prevent further waste of natural gas it should have a tendency to improve the general situation as it will also reduce the excess production of crude oil. It is the intention of operators and State officials to shut in a total of 65,000 bbls. per day of crude production in a number of fields but it will probably be several weeks before this goal is reached, although some of the larger producers have already completed tentative curtailment plans which may be put into practice upon a moment's notice. The plan to reduce crude oil production, unlike the conservation measure initiated at Ventura Avenue, contemplates the shutting in of heavy unrefinable crude which has been piling up at an alarming rate for several years.

A. W. PEAKE TRANSFERRED TO INDIANA STANDARD

CASPER, Wyo., Mar. 12.—George H. Jaques has been appointed general superintendent of the Midwest Refining Co., succeeding A. W. Peake, who has been transferred to the Standard of Indiana.

EMPIRE P. L. STATEMENT

The Empire Pipe Line Co.'s statement for February shows crude oil receipts in Kansas and Oklahoma of 812,524.28 bbls., daily average 28,018.08 bbls.; deliveries, 884,780.16 bbls., daily average 30,509.66; stocks February 28, 4,262,149.36 bbls.

Short Trip Suggestions—Places of Interest You and the Family May Visit in Car

J. T. J. R. COLLINS
SHEET METAL WORKERS
Good gutter is as necessary as a good roof on your house.
We also do radiator repairing and recovering.
Call Us!
Phone 694 113 N. 22nd St.

LAST CHANCE
FILLING STATION
STOP HERE FOR GAS
GROCERIES AND MEATS
Frank Danger
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ATTENTION
Auto Owners
Precision equipment plus careful workmanship means longer lasting repair job on your motor.
Valves, Brakes and Electrical Equipment
Factory equipment for battery, brake and valve service.
No charge for inspection.
Drive in or Phone 254.
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ERVIN AUTO SERVICE
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HUPMOBILE
The New Century Eight—The Six of the Century.
These Cars—These Values—The Greatest of the Century.
NOW—Westinghouse Air Brakes at
CHANDLER
High Powered—Magnificence
Let us tune up the old car for this spring's pleasure drives.
HUPMOBILE MOTOR SALES DIVISION
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SUBWAY FILLING STATION
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910 N. Central Parsons, Kansas

THE NEW AND BETTER
TEXACO
Stop at the first Texaco pump you see. All tanks and pumps are now supplied with the new product. Fill with Texaco Gasoline; and Texaco Motor Oil, the clean, clear, golden oil, known everywhere for its quality, full body and purity. You will note with pleasure the improved operation and condition of your engine.
WEBBER BROS. OIL CO.
13th and Main 25th and Main
24th and Morgan 32nd and Main

AEROPEL GASOLINE
TANK UP FOR YOUR TRIP WITH AEROPEL
More miles—Knockless. More Power
We are exclusive dealers for
PENZOIL and VEEDOL
PEERLESS OIL & REF. CO.
PHONE 89
22nd and Main 32nd and Corning
18th and Belmont 22nd and Stevens

Short Trips You Can Take Regardless of Threatening Weather!

Know Labette County and Southeast Kansas First.

Fill your gas tank before leaving home and increase good road fund

CHANUTE: 40 miles of gravel road, northwest of Parsons. Follow 73W Federal Highway, this route takes you through Erie and Shaw. Many points of interest along this route.

CHETOPA: This city is located on the Federal Highway No. 74W, 30 miles southeast of Parsons. Gravel road. Take either 32nd St. road or East Main through Labette. You will see some of the best farming country in the county on this trip.

EDNA-ALTAMONT: Edna is located in the southern portion of Labette county, is at present the center of drilling operations in this county. About 25 miles from Parsons. Rock roads. You go by way of Altamont, where the Labette County Community High School is located. See this building and grounds.

ERIE: The county seat of Neosho county, a 40 minute drive north of Parsons. The new chat road is a wonderful improvement. Hedge fences have been removed along this route. You will see these improvements and marvel at them. The levees along the Neosho River have been rebuilt since the floods. Take this drive.

INDEPENDENCE: The home of the Prairie Oil & Gas Co., and a city of beautiful homes and much wealth. 35 miles west of Parsons. Two routes out of Parsons—go west to Dennis—south on chat road to Mound Valley and west on gravel—or go south on 32nd St. to Altamont and then west on Gravel through Mound Valley.

LEAD and ZINC: Two hours from most any point in Labette county will put you in the heart of one of the world's greatest lead and zinc cifelds. Millions of dollars have been taken from this field in these ores. The chat being used for our good roads is shipped from the mills in this field. To get there from Parsons follow 73W to Oswego—east on gravel road 6 miles—south 10 miles—east 5 miles and you see the mountains of chat and many great ore mills. This trip is worth your time. You can return through Columbus, county seat of Cherokee county.

LAKE McKINLEY: Where the state has built an immense reservoir for a state fish hatchery. The water is now backed up under the bridge almost a mile north of the big dam. There are hundreds of ducks on this lake now. The Boy Scouts have their club house under construction at this time. Many cottages will be erected there this season, it is said. The new rock road is practically completed. Go north on Tenth street out of Parsons and follow the gravel—a 20-minute drive and a pleasant place to take the family for an evening.

MOUND VALLEY: For a 34-mile drive through this valley town from Parsons, go west on Main to Dennis—turn left on chat road. This route will carry you through part of the high mound country, enables you to get a magnificent view of the valley for miles and miles. On your return, go south from the valley to rock road and return through Altamont.

OSWEGO: County seat of Labette county. Besides a beautiful river park the Deming home is one of the show places of this county. One mile south is where the "Onion King" has his ranch, 10,000 bushels of onion sets are shipped from this place annually. An hour drive from any point in the county.

SERVICE: Where the Kansas Gas & Electric Co., has spent millions of dollars on their electric plant and are still building additions to it. You will see the highest smoke stack in the world except one, (which is located in Japan), standing at the base of this stack one gets the impression it is falling. 10 miles east of Parsons. At present, detour through Montana until the new bridge approaches are completed at the river.

PITTSBURG: Where the State Manual Training School is located. In the heart of the southeast Kansas coal fields. A beautiful city. 35 miles east of Parsons. Gravel and chat roads—no mud.

A FOUR-HOUR DRIVE: From any point in the county will put you in the strawberry growing district of the Ozarks. On this trip you pass through many towns of interest. Joplin is on the route.

Parsons to:

Erie	18	LaJunta	480	Muskogee	147	Kansas City	170
Chanute	40	Denver	675	McAlester	215	Oswego	23
Iola	58	Coffeyville	38	McCune	15	Columbus	28
Emporia	136	Neowata	65	Pittsburg	28	Galena	56
Junction City	220	Tulsa	120	Girard	37	Joplin	60
Cherryvale	21	Ponca City	137	Fort Scott	67	Carthage, Mo.	70
Independence	30	Oklahoma City	227	Nevada	87	Springfield	150
Sedan	62	Amarillo	525	Sedalia	215	Neosho	80
Winfield	117	Miami, Okla.	58	Paola	136	Siloam Springs	132
Wichita	165	Vinita	64	Ottawa	110	Fort Smith	215
Dodge City	292	Wagoner	121	Topeka	117	Little Rock	310

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Give More Power
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HIGHWAY FILLING STATION
Buy VIM and PEP GASOLINE
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SINCLAIR GASOLINE, OPALINE MOTOR OILS
Our specialty, greasing and oiling cars.
Service Guaranteed.
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Our vulcanizing and repair work guaranteed. The best of materials always used, and by experts.
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We sell and service batteries — if your radio does not work it may be battery trouble—if the Ford gets stubborn the battery may be indisposed.
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GAS B OILS
SQUARE
To your ENGINE with
BARNSDALL PRODUCTS
STEELE & SHARSHEL
18th and Wash. Stevens and Cent. 26th and Main

Make Your Trips in a
NEW
Buick
or a USED BUICK
The world invests almost twice as many dollars in
BUICK
motor cars as in any other car—or combination of cars produced by any one manufacturer . . . in all price fields above $525.
A. HOOD & SONS

FISCHER'S
Auto Toggery
Auto Glass
Top and Trimmings
Seat Covers
Battery Station
Batteries
Electrical Repairs
Recharging
210 North 18th Phone 244
Service for the discriminating motorist

Facsimile of a page from a Kansas newspaper designed to increase gasoline consumption.

A.O.M.A. Members Consider Situation

Interesting Discussions at Annual Meeting. New Directorate Indicates Greater Activities of Organization

By J. B. Waldo

CHICAGO, Mar. 10.—The annual meeting and spring convention of the American Oil Men's Association was held at the Stevens Hotel, Chicago, on March 6, 7 and 8. The attendance was not as large as was hoped for owing in part to the conflict of dates with other gatherings of oil men and in part to many important State meetings held in the past month. Some of the leading and most active members of the organization, including its president, were prevented by important business from attending this convenion. The addresses were all by practical oil men who had a message to the members and the attendance at the meetings showed interest and it is hoped those present profited by the discussions. The keynote was "Profits for 1928." The majority of the speakers held out a warning signal that all was not well with the industry and that it was very much in the hands of the individual concerns, refiners and distributors to correct the abuses which were summed up by one speaker as "too much of everything."

Election of Officers

The officers were re-elected as follows: President, A. S. Close, Hickok Producing Co., Toledo, Ohio; first vice president, G. I. Sweeney, Sweeney Gasoline & Oil Co., Peoria, Ill.; second vice president, J. J. Theisen, Theisen-Clemems Oil Co., St. Joseph, Mich.; third vice president, J. Bruce Gafill, Gafill Oil Co., South Bend, Ind.; treasurer, H. T. Bayard, Atlas Petroleum Co., Chicago; secretary, James A. Gilmore.

Directors were chosen as follows: John M. Carson, Atlas Petroleum Co., Chicago, re-elected; W. W. Springborn, Fairmont Oil Co., Cleveland, Ohio, succeeding A. J. Callaghan, American Oil Corp., Jackson, Mich.; Morris Milder, U. S. Oil Works, Omaha, Neb., re-elected; A. C. Carpenter, Lesh Oil Co., Ottawa, Kans., succeeds T. J. Gay, Gay Oil Co., Little Rock, Ark.; E. E. Wissler, Herring-Wissler Oil Co., Des Moines, Iowa, succeeds Robert McDowell, Mid-Continent Petroleum Corp., Waterloo, Iowa; Fred Sefton, Minneapolis, Minn., re-elected; B. H. Anglin, Indian Refining Co., Lawrenceville, Ill., succeeds A. T. Locke, Locke Oil Co., Chicago; R. S. Williams, Williams Oil Co., Muncie, Ind., succeeds G. T. Wofford, Wofford Oil Co., Atlanta, Ga.

There was a considerable infusion of new blood into the directorate and it is expected that the change will result in greater activities for the organization. Several of the directors who had been active in past years asked that they be not considered for re-election. There was only a very general discussion of future plans but there will be a meeting at an early date of the new board to map out a campaign for the coming year. The reports of the officers so far as made showed a satisfactory condition in the organization. There was quite a little talk among the members regarding the number of conventions and meetings of one kind and another which the oil man was expected to attend all of which were of importance but which took time from the business, which was after all the matter of first importance.

Secretary Gilmore's Address

Following the opening day's luncheon, James A. Gilmore, secretary of the association, called those present to order. His address was introductory to the keynote of the meeting which the program stated to be "Profits for 1928." He mentioned the lack of profits that had been the result of last year's business with many of the marketing companies but stated that such a deplorable result was not universal nor necessary if the reports of other jobbers were considered. He instanced several of the retail marketing organizations which had made substantial gains in the volume of merchandise moved at their stations with a perfectly adequate profit. A telegram was read from the president of the American Oil Men's Association, A. S. Close, of the Hickok Producing Co., stating that he had been unavoidably detained and could not be present at this meeting. The chairman then began to call upon the representatives of the exhibitors to each of whom an opportunity for a three minutes' talk had been given. The first to respond to the chairman's summons was the veteran "Jim" Graver of the Graver Corp.

After those of the exhibitors who so desired had talked, Frank W. Lovejoy, sales manager of the Vacuum Oil Co., was called upon to "pinch hit" for President Close.

Mr. Lovejoy's Plain Speaking

Mr. Lovejoy said it was less easy to pinch hit on an occasion like this than in a baseball game but since he was to talk to the oil men he should speak boldly. And he did. In fact, there was a great deal of bold talking, or, in other words, severe criticism of the methods of the oil men all through the addresses. Mr. Lovejoy took for his subject "Profitless Prosperity." He said that the conditions complained of in the oil industry, which were chiefly too much of everything, were also met in other industries. Recently he talked with cotton merchants who complained there was no market for cotton goods. The women no longer wore cotton but silk or rayon. A drug jobber had his complaints to make of business conditions.

Mr. Lovejoy said there was no sign of any let up to the competition and that if 1927 had been a bad year as was shown by the statements of the large oil companies already made public and which conditions would be made to seem even worse when the ones not yet revealed were made public, that the year 1928 promised to be just as bad from the standpoint of competition. One reason given for conditions being as they are was that the oil men, large and small, had followed a craze for volume and had not given sufficient attention to profits. For one thing, the average manager of an oil company instead of planning his own business was too much influenced by what his competitors were doing. If his competitor built a filling station he thought that he must build one larger and more expensive. If a competitor added one gasoline pump the usual result would be for the competing concern to add two pumps. The conditions of several oil companies were compared. One in particular was mentioned which operated 157 stations and which made an absurdly small profit on its total sales. Out of these stations 25 were operated at a loss. Most of these were outlying stations which should never have been established and which had better be abandoned. Many located their stations too far apart and others too close together. In the first case the stations could not help each other and in the latter they simply divided the business that should have come to the company, the stations doubling the cost and not increasing the business. He urged the oil men present to compete for profits, not for volume of sales.

Many of the oil companies, both refiners and marketers, have failed to develop their opportunities by disregarding the attitude of the public toward their businesses. Any business really is the public's conception regarding that business. In following this thought, Mr. Lovejoy sketched very briefly the growth of the industry and the development of the service station idea and showed how it was possible through publicity and through trained attendants to mold the public idea of the oil business. He said that we must all get away from the old idea of the station attendant and in its place think of him as our most valuable means of getting in touch with the public, stressing the value to an oil company of courteous, skillful attendants who actually were the best of salesmen selling to the public the idea of service and products as well as of prices.

Women are today probably a dominant factor in the purchase of gasoline and oil. It is estimated that there is one car for every family in the United States and that every other car is driven by a woman. Over 1,000,000 cars are registered in the name of a woman owner. The automobile companies are good indicators of the importance of the woman buyer. If you do not believe this, said the speaker, note the advertisements of the various cars. They stress the harmonious colors of the car, the upholstery, the comfort of the seats, the ease with which the car may be driven and controlled, all to attract the favorable notice of the woman driver. Some of the station owners have recognized this fact. Some of the California service stations have found it profitable to employ women attendants, who, neatly garbed in white, have been found not unattractive to the male patrons of the stations.

Competition From Outside

Speaking of competition from without the oil industry, Mr. Lovejoy stated that a little over 97 per cent of all the automobiles in the United States were made by 11 automobile manufacturers, one company claiming to sell 44 per cent of all the cars. Competition between these companies was very keen and profits reduced to a small percentage. With these companies it was a question of the power to survive. To increase its business, one large company, it was stated, was planning to have its agents sell gasoline and lubricating oils. One reason for this was that it would keep the car owner closely in touch with the agent and make it that much easier for the latter to sell the owner a new car of the same make. If you do not believe that this competition will be much of a factor find out the quantity of oil disposed of by some of the car companies. You will be surprised.

Reputation is the essential thing in selling a product yet many of the oil companies are placing that reputation for good products, fair dealings, courteous service and reasonable prices in the hands of untrained and irresponsible attendants. The station attendant is really the point of contact between the oil company and the public which latter makes and breaks reputations. In discussing the position of the oil men, refiners and distributors, the speaker said that this or any convention of oil men was not worth the carfare to Chicago unless the oil men

(Continued on Page 103)

FAST GROWING LOAD OF TAXATION AS HANDICAP TO OIL INDUSTRY

By Frank E. Packard*

General and Tax Attorney, Standard Oil Co. of Indiana.

"Sweet are the uses of adversity" sang the poet. He doubtless had in mind the Oriental concept that soul searchings are spiritually profitable. The annual statements of the oil companies for the year 1927 ought to result in profitable soul searchings. Although the gallonage was all right showing substantial gain, the profits and loss account was anything but inspiring.

Will this adversity have its use? Will there be soul searchings and financial regeneration? Will oil executives understand that there is something to the industry beyond gallonage? Will they consider it quite as important to save dollars as to sell gallons? Will there be a general recognition that cut prices, free equipment, extravagant marketing costs, taxation and legislation, if given proper attention, will yield saved dollars? Or, will gallonage continue to be king? It is not a truism that "gallonage achieved, profits follow."

Too little attention has been paid in the past to laws written upon the statute books or valuations written upon tax duplicates. Few are the battles which have been waged to preserve the freedom of action in the fields of business; and even fewer have been battles waged to escape profit-destroying tax burdens. The motto of the industry would appear to have been, "bring on your burdens and see if we care."

Tax Exceeds Profits

I said last December at the annual meeting of the American Petroleum Institute that I thought the tax burden for 1927 of the oil industry in this country would be in excess of $300,000,000. I desire to revise that statement. In the light of more recent data I am inclined to believe that it will reach more nearly $350,000,000. This is a staggering sum and probably in excess of the total net profits of the industry for the year.

Taxes have been annually multiplied during the past 15 years, and the industry has cheerfully, willingly, I might say joyously, paid them, regardless of legality or equality, until a position has been reached where these expenditures constitute one of its major problems.

The editor of a great financial publication the other day inquired as to where I got the notion that taxes were a burden on profits, since they were passed on the consumer. The obvious answer is that a mounting tax burden must finally reach a point where, if added to the normal cost of production and distribution, plus a reasonable return, the economic law of decreasing consumption with a mounting price will become operative. This law operates to curtail consumption only where the demand for the commodity is great, but if there be an overproduction and anxiety on the part of producers to reduce surplus stock with a consequent price reduction, the inevitable result is a curtailment of profits. Goods must move in order to avoid financial difficulties and prices are reduced to tempt buyers. Prices are slashed and the entire industry moves to a lower price level. In other words, Smith must meet his payroll and will take a fourth of a cent profit instead of a one-half cent profit per gallon. If the 3-cent gas tax was removed, supply and demand being equal and the financial

(Continued on Page 86)

*Before A.O.M.A. Convention, Chicago.

Sorrento Dome Notable Achievement

Only Oil Pool on Gulf Coast East of Mississippi River Good Example of How the Term "Wildcat" Originated

By Neil Williams

NEW ORLEANS, La., Mar. 10.—If a wildcatter had his way about where to open the country's new oil fields he might choose a high and dry spot on a paved highway easily accessible to some good city and where transportation facilities, already available, could speed the movement of equipment and supplies.

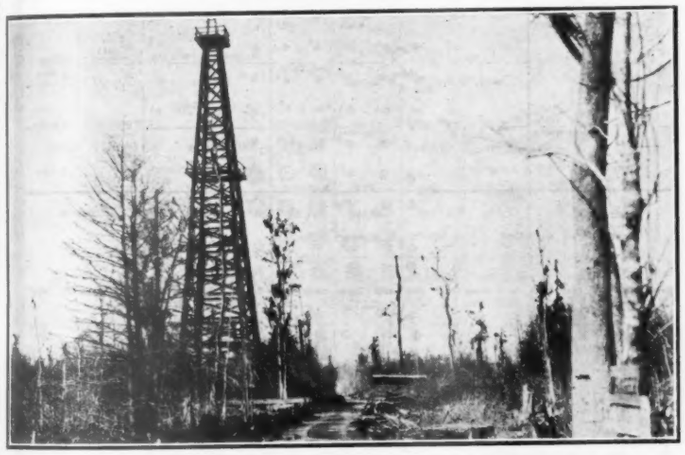
But Providence doesn't seem to work just that way. And, like the old saying, "If the mountain won't come to Mahomet, then Mahomet must go to the mountain." So if the oil field won't come to the oil man, then the oil man must go to the oil field.

Thus it is that the wildcatter usually is a pioneer of pioneers, reaching out into the remotest and most virgin territory, where little or nothing has been prepared for his coming, where the hardships and discomforts of life must be endured, and where every obstacle must be overcome—all for the sake of keeping the world supplied with oil.

There the oil fields of today and tomorrow are being brought to light and it is to them that people, civilization, improvements, comforts, roads and transportation must follow, rather than lead.

Drilling in Swamps No Joke

Many persons who seem to have an idea that drilling a well consists merely in "putting down a hole, then selling the gusher production and living happily ever after on the millions accumulated," will be interested in reading the accompanying article describing the new field opened by the Gulf Refining Co. in Ascension Parish, Louisiana. A second article, telling of the development of the field, the first opened on the Gulf Coast east of the Mississippi River, will be published in The Oil and Gas Journal next week.



Gulf Refining Co.'s No. 4 United Land Co., the discovery well of the McElroy (Sorrento) Field, with the steel derrick of No. 5 shown among the trees in the background. This also shows a section of the plank roadway connecting the two wells.

Sorrento Dome an Example

South Louisiana's newest field in Ascension Parish, is not an exception to the general rule. The McElroy Pool, or Sorrento Dome as it is called sometimes, is in the center of one of that State's myriad cypress swamp jungles, 7 miles from the nearest automobile road.

Reached only by a small railway line which passes 2½ miles distant on a narrow strip of right-of-way, practically the only ground above water for miles, the new pool's only link at present with the outside world is a narrow plank roadway laid down through the dark musty swamp to McElroy, which consists only of a section house and siding.

As many other Gulf Coast fields have been started in swamps, Sorrento's chief claim to distinction is the fact that it is the first coastal field east of the Mississippi River, and, in opening the pool, the Gulf Refining Co. of Louisiana has stepped beyond the borderland of expected pools and has thrown open the gates of an extensive territory available for prospecting.

It was only reasonable to expect that the Gulf Refining Co. of Louisiana, the operating arm of the Gulf Production Co. in Louisiana, should go into that virgin territory and bring to the surface an oil field. This company, having considerable experience in seismograph work, has been aggressive in the search for new salt dome and has taken the lead generally in prospecting along the Gulf Coast.

To get to the new pool one must go either to New Orleans or Baton Rouge, perferably the former because of train connections, and take the Louisiana Railway & Navigation Co.'s daily passenger train or a local freight to the flag stop at McElroy. McElroy is 50 miles northwest from New Orleans along the Mississippi River and about 35 miles southeast of Baton Rouge. It is from McElroy that the 2½-mile plank roadway extends to the Gulf camp and wells.

To go by automobile, it is possible to drive from New Orleans or Baton Rouge to Sorrento, a lumber town of about 1,500 population which occupies a small spot of high ground on the edge of the swamp about 7 miles northwest of McElroy on the L.R.&N. Railroad.

At Sorrento the automobile must be left behind and a tiresome walk down the railroad right-of-way begins unless one is lucky enough to find the section crew's motor car not in demand. Many of the Gulf's crew at the field store their cars at Sorrento and when off tour manage to get to that town and then drive into Baton Rouge for recreation.

The pit of oil at the field containing between 35,000 and 40,000 barrels. This earthen reservoir once was the log pond for an old sawmill.

The end of the road. It is into this swampy jungle that the Gulf Refining Co. will have to cut and build a board road to drill another test.

Start Into the Swamps

At McElroy, the journey into the heart of the jungle swamp starts. It is from there that the roadway of planks has been laid, sometimes floating on top of the mulky mire and sometimes sagging from sight under the weight of one of the camp trucks. The wooden road follows a narrow, winding cleared strip, the only passageway through that country.

As for the roadway, the coming of the Gulf's "shooting" crews, and later the drilling crews, was not altogether unprepared for, thanks to pioneer lumbermen who 20 years ago built a saw mill in a clearing near the present location of the Gulf's drilling activity.

It was these lumbermen who cut the narrow swath through the water-soaked, dense swamp underbrush and laid a logging railroad from the L.R.&N. at McElroy to the mill. In fact, that is how the McElroy siding and station came into existence, it having been put in by the railroad for the benefit of the logging camp.

In those early days, McElroy was a bustling little station as load after load of timber and lumber came out of the dark swamp forest to be shipped away to the outside world. The scores of lumbermen employed at the camp came and went and McElroy was a profitable investment for the railroad.

But the time came when all the desirable timber was hewn out of the swamps, the saw mill was shut down, the camp torn down, the lumbermen moved on to other virgin timber—and, for years McElroy has been nothing but an abandoned siding. When the Gulf's "shooting" crews went into those swamps just a little over a year ago they found little to show that 20 years ago the swamp jungle was teeming with the life of the lumber pioneers.

McElroy Deserted Station

At McElroy, the deserted station and the yawning opening into the swampland, where once had stretched the logging railroad, remained. The rails had been taken up as the last act of the retreating lumbermen but most of the log ties lay rotting in the mire.

Of the cleared swath and the water soaked ties, the Gulf's crews made quick use, laying down heavy planks, freighted

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Little River Plan Means Big Saving

Active Drilling Program Would Have Cost Over $10,000,000 With Probability One-Fourth Lost Through Dry Holes

By J. L. Dwyer

The two maps accompanying this story give a good idea of two conditions in the territory south of the Little River Pool in Oklahoma. The first shows the situation which now applies to this region where nine test wells are drilling; and the second, the situation which would have been presented had drilling been permitted to continue unbridled, as it was in the early days of the development of the Greater Seminole area. The early Seminole drilling caused a flood of oil to be thrown upon the market from the Seminole City, Bowlegs and Earlsboro Pools, resulting in the overproduction situation of 1927.

While the map showing the second condition is only the author's conception of how the picture would have looked if the producers had failed to get together on the restrictive drilling program, it is conceived from a study of old maps which pictured the activity in the early stages of the Bowlegs and Earlsboro Pools of this region. Possibly there are some who will not agree with this picture, but if anything, the number of wells has been limited rather than increased.

When the Seminole advisory committee composed of Howard N. Cole, chairman; J. J. Conry, general superintendent of the Carter Oil Co.; R. B. Pringle, vice president of the Independent Oil & Gas Co.; R. F. McArthur, vice president of the Barnsdall Oil Co.; and Joe S. Sidwell, of the Prairie Oil & Gas Co. together with Ray M. Collins, umpire in charge of the Seminole Field, evolved the plan which is now functioning so well, it was marked as the most constructive piece of work which the oil producers of the Mid-Continent Field had accomplished.

The economic effect of this program will, when the final chapters have been written, determine the real worth of such a plan, but in the meantime, the cold figures showing the saving in dollars and cents probably makes the most interesting reading.

South of the limits of the Little River Pool there are two wells which establish the presence of production, and give promise of other pools to consider for future supply of high gravity crude. The two wells are the Independent Oil & Gas Co. and Highway Oil Refining Co.'s No. 1 Harris in Section 23-7-6; and the Snowden & McSweeney's No. 1 Tiger in Section 13-7-6. The wells are exactly 1½ miles apart; and approximately 2 miles south of the limits of the Little River Pool. They both are good wells making jointly 6,100 bbls. of oil daily from the Wilcox sand.

The presence of these two wells under the normal method of operation, would cause the land between their locations to be dotted with rigs and drilling operations. Instead of that, today we have nine drilling wells spaced roughly about a half mile apart, and intended to test out the structural conditions which apply in this area.

The nine wells now drilling will represent a total cost of $675,000 if air lift equipment is required (and it is the rule in wells in this region) and this sum will furnish an adequate idea of the subsurface condition of this area.

On the second map accompanying, there are 143 drilling operations charted, and this figure represents the approximate number of operations which would now be under way had unlimited drilling been the rule. The 143 wells would have represented a cost of $10,725,000, using the same method of calculation as given above.

Just what percentage of this amount will be saved by the program is problematical, and will be governed by the percentage of dry holes which would have been drilled among the 143 operations. The territory south of the Little River Pool is believed to be exceptionally spotty and irregular in structural conditions. There have been several contradictory conditions encountered in this territory. The Barnsdall well shown in Section 22-7-6, was one of the highest wells in the area from a structural standpoint, but in point of production, it was almost a dry hole. The well of the Independent Oil & Gas Co. and Highway Oil & Refining Co. is an excellent producer and is making over 2,500 bbls. per day, but from a structural standpoint it is 130 feet lower than the Barnsdall well.

Structural Conditions

Conditions such as mentioned above may be expected to furnish many eccentricities in production, and this factor is believed to have exerted an unusual degree of influence in making possible the agreement to drill the nine wells. There are some who hold that if the 143 wells had been started, 25 per cent of them would have been failures, and the amount of money lost through their drilling would have repersented $2,160,000. It seems logical to estimate that at least this much money has been saved by the adoption of the limited drilling plan ,and there is another angle to be considered.

The other angle is the crude price structure. Slowly recovering after a lengthy depression, the present supply of high gravity oil is barely sufficient to meet the requirements. Had a flood of this quality of crude been thrown upon the market, it is likely that the price would have been subjected to a revision downward, and not only the Seminole area would have suffered as a consequence, but the entire producing branch of the industry would have been affected, and as a result would have had another substantial decrease in earnings.

In the early days of the Seminole City Pool, there were three producing wells, one in Section 26, one in Section 23, and one in Section 24. Two of them were producing from the Wilcox sand, and one from the Hunton lime. When the three wells were producing, almost 200 wells were started. They ranged in all directions from the three wells, and covered the intervals among the three fairly well. There was not a location in any direction within half a mile of any of the three wells which was not covered with a rig, and in the majority of directions

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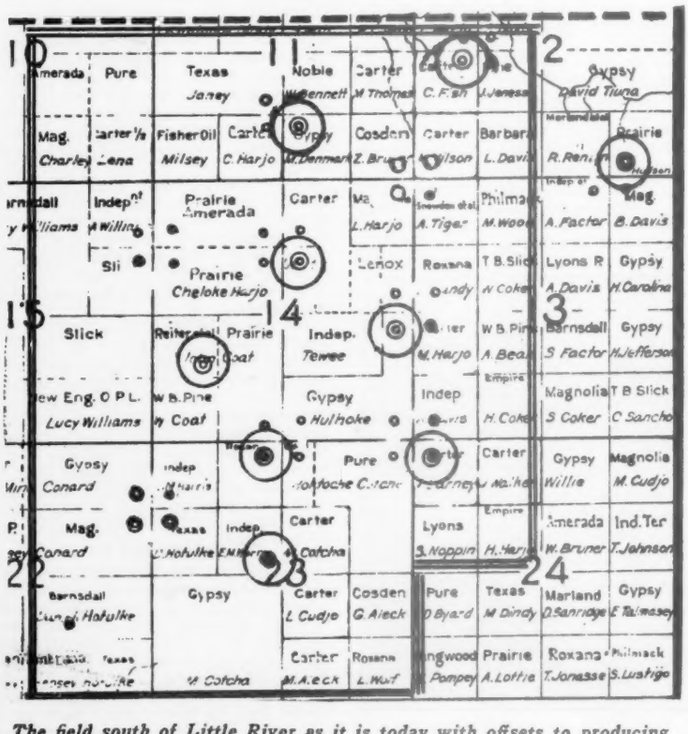
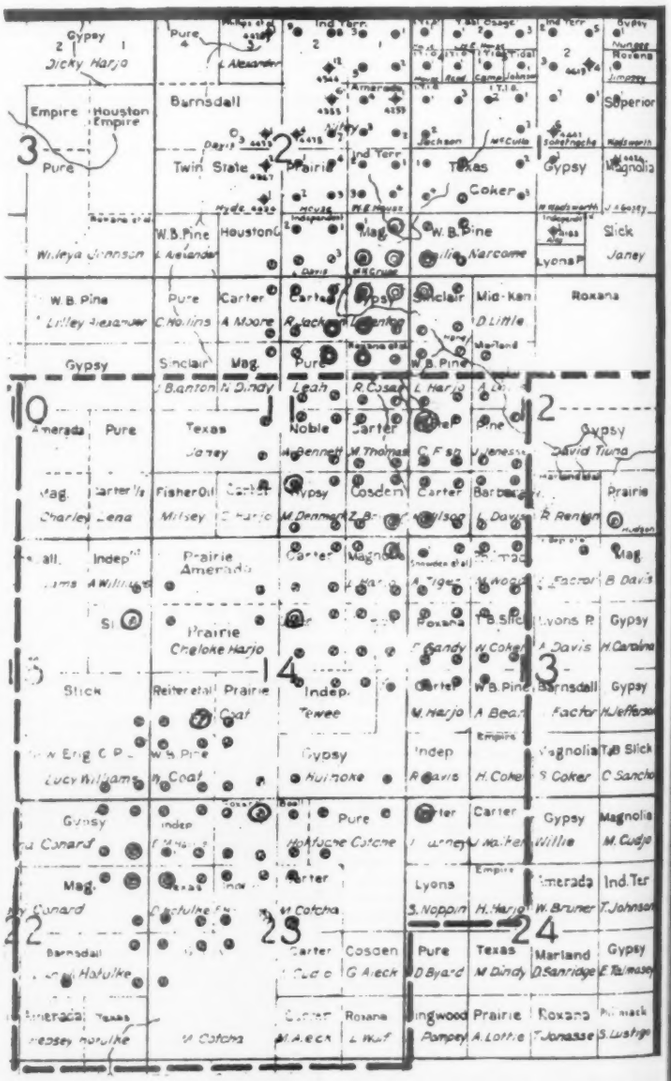


The field south of Little River as it is today with offsets to producing wells, and nine test wells drilling.



An idea of how the field south of Little River would have looked if drilling had been pursued under ordinary methods of operation. Double circles show wells actually drilling; single circles, wells which would have been started under former plan.

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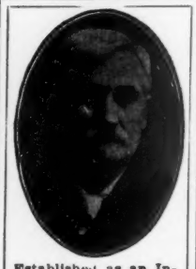

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OUR DEBT TO THE GEOLOGISTS

The American Association of Petroleum Geologists, which holds its annual meeting in California next week, is a concrete demonstration of recent development in the oil industry.

Founded in 1917 with less than one hundred members, the association had grown to a membership of 1,940 on March 1 this year. In the past five years it has more than doubled its numbers.

This remarkable growth in membership reflects the increasing place the petroleum geologist has come to hold in the oil industry.

The rise of the petroleum geologist, in fact, has followed much the same course as that of the geologist in the mining industry.

He has grown with the extension of his service and the expansion of his knowledge. He is occupying a continually broader field so that his activities are no longer limited to the narrow sphere in which he started but are widening to include petroleum engineering and administration, as witnessed by the increasing number of geologists holding important positions in these capacities.

Just as the petroleum engineer and the executive have found it advisable to know something of the fundamentals of petroleum geology, the petroleum geologist has found it necessary to study the problems of the production engineer and the management.

Each has found that the other has had something to contribute to the general knowledge, making for greater efficiency all around as a result of co-ordination of effort to a common end.

Originally concerned with the finding of oil the petroleum geologist long ago advanced from surface observations to study of the formations as revealed in well logs, drill cores and details of producing formerly unthought of. His observations and conclusions have been invaluable to the production as well as the finding of oil.

It has been an axiom in the industry that only the drill can tell but the marvelous progress of modern geology in suggesting where to drill has been largely responsible for the success of the drill.

To the man in the street who thinks only of punching a hole in the earth and getting oil the knowledge of subsurface formations gained by the modern geologist would seem more wonderful than the radio or television. To the geologist of the early days of the profession it would seem only less so, so great have been the advances in the past few years.

It seems a far cry from the oil seep and the outcrop to present-day knowledge of the principles of the accumulation of oil but the petroleum geologist has bridged it in a very brief period.

And in that period the oil industry has developed from a "game" into a science.

Eleven years ago 94 petroleum geologists sufficed for the industry. Today 1,940 are engaged on oil problems, serving the industry in the search for oil, in production and in executive positions of the highest rank.

Much has been said of the amazing advancement in production engineering and in refinery and natural gasoline manufacturing but the achievements of the petroleum geologist measure alongside.

They are constantly extending their knowledge, taking advantage of every innovation that will aid in enlarging our information about the accumulation of oil and the subsurface structures.

The use of geophysical instruments which to the uninitiated may seem like a scientific elaboration of the "doodle-bug" or the "hazel wand" of pioneer days, has become almost commonplace on the Gulf Coast in the past three years and is coming into service in other areas.

The location of salt domes by the use of the seismograph or the torsion balance, the employment of the magnetometer and other variations of geophysical research, has been justified sufficiently to warrant the expenditure of millions of dollars by sternly practical managements that demand results.

These instruments may not be infallible, in fact it is emphasized that they are not oil finders but merely locaters of structures possibly favorable to oil accumulation, but they have added immensely to the geological knowledge of the sections where they have been used. Incidentally, they have the discovery of several domes to their credit and the location of many additional prospects.

Large areas whose lack of indications would have baffled the searcher for oil have been tested by wholesale surveys regarded as giving a fair idea of the subsurface conditions and while it is possible that domes may be found beyond the range of these instruments the conclusions drawn from their disclosures are regarded as approximately correct for all immediate purposes.

The money spent on these scientific explorations has been considered justified by the discoveries made, by the knowledge learned, and by the money saved through the release of lands and the avoidance of useless drilling.

In this work the petroleum geologists have naturally played a principal part while at the same time gaining information that will be of incalculable value to the industry in its general application in future development.

In the present intensive study of means of increasing recovery of oil the petroleum geologists are also taking a leading part. Questions of the uniformity of the sand, porosity, texture and oil saturation, the oil-gas ratio, flooding and repressuring, earth temperatures, correlation of formations in crooked holes, calculations of the depths for setting pipe and finishing wells, all engage the attention of the petroleum geologist and call for his services.

The program of petroleum research now in progress under the direction of the National Research Council and the American Petroleum Institute is based largely upon petroleum geology both on the theory of the origin and accumulation of oil and on the possibilities of greater recovery.

In the light of today's overproduction it might be said that the petroleum geologist has been only too successful but this has been said also of the production engineer with his gas lift and of the refiner and natural gasoline manufacturer with their continuing perfection of methods and processes.

The discovery of deeper sands has been as big a factor as the discovery of new pools and extensions. To all of these developments the petroleum geologist has contributed materially. It is impossible to conceive of the present efficiency of the oil industry in any division had it not been for the labors of the modern geologist whose experience and knowledge have not only enabled us to maintain and enlarge oil production but have been at the command of technologists and practical oil men in every branch of activity.

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DOMINATE

Gray County Leads in the Panhandle

Field Work Increasing Following Price Readjustment. Good Completions in the Gohlke Pool, Archer County

By James H. Dameron
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Mar. 12.—For the first time in several weeks, Panhandle, Wichita Falls district, and Ranger district closed a seven-day period without one of the three reporting the opening of a new pool. Development in those three districts, however, showed an increase along with several developments of interest and importance. The combined production of the three districts showed a loss of 1,206 bbls. in daily average with only Wichita Falls district showing an increase. The latter increase was from completions in flush areas of that district.

Gray County was the chief spot of interest in Panhandle and, incidentally is one of the most active counties in the State. It easily leads in the Panhandle with 85 operations, 49 of which are drilling wells.

Bowers Pool in that county, and the most recently discovered flush field in Panhandle, was back in the spotlight early in the week. Delaney and associates' No. 6 Jackson, Section 88, Block B-2, penetrated 1 foot of granite wash pay topped at 2,965 feet and started off flowing at the rate of 140 bbls. per hour. The well flowed 1,300 bbls. the first 15 hours but was showing 1 per cent b.s. Oil from that well tested 41 gravity corrected.

Several of the tests scattered over the county reported showings of varying worth during the week. Only one completion was reported from Gray County and that was a gas well completed on part of the Empire Gas & Fuel Co.'s Panhandle gas reserves. Two completions were reported in Hutchinson County, one being a small well and the other a deep failure. Wheeler County rounded out the completion report with a small gas well for that county.

Field Work Increasing

Field work is generally showing an increase in Panhandle due to the recent boost in price of Panhandle crude. Gray County seems to be the favorite county among operators at this time because of the high gravity crude produced. Locations reported at the end of the week indicated a continuation of increased field activity. Sixteen new locations were reported, 10 of which were made in Gray County and the remainder made in Hutchinson, Moore and Wheeler Counties.

Stock reports for February for the Panhandle show the storage situation in that field to be about the same with 18,478,000 bbls. in storage. The total storage capacity of the field is 24,300,000 bbls. No new tankage was constructed during February.

Pipe line movement amounted to around 1,278,000 bbls. through the three trunk systems running out of Panhandle. Gulf-Magnolia companies' line handled 9,200 bbls. daily. Humble Pipe Line Co. was the largest buyer moving crude by sending 28,700 bbls. daily through its line. Prairie Pipe Line Co. moved 6,200 bbls. daily through its trunk system to Ringling, Okla. Tank car shipments totaled 2,480 cars during February.

All of the crude being pumped out of the field is not reaching the coast because 650,000 bbls. of that crude, along with some West Texas crude, was reported in stocks being held in the Ranger district. Prairie Pipe Line Co. is reported to be storing Panhandle crude at Ringling, Okla. Ranger district stocks showed an increase when they totaled close to 9,000,000 bbls. on March 1.

Good Wells in Gohlke Pool

Wichita Falls operators' chief interest was in the completions reported from the Gohlke Pool in Archer County and the shallow Loving Pool in Young County. Spice was given the week's activities by lease trades the largest of which was a $75,000 cash deal.

Shappel Oil Co., Wichita Falls, purchased a 40-acre lease in the Loving shallow pool from Beard, Millican and Ford, for a reported cash consideration of $75,000. The lease is the west 40 acres out of the south 200 acres of the Ed Sargent Survey, northeastern Young County. It has one 200-bbl. well on it and is a diagonal northeast offset lease to the discovery lease. This deal is the second of consequence to be made in that pool during the past 10 days. Only one completion in that area made better than 200 bbls. during the past seven days and the other completions were either small wells or failures.

Several good completions were reported from the Gohlke Pool in Archer County and the flush being taken from that pool is giving Archer County an increase in daily average production. The pool is the most active area in the Wichita Falls district.

Jack County gained the attention of operators when Lydecker and associates' No. 1 Bryson, McKenzie Survey, southwest of Bryson, was reported to have flowed 50 bbls. from a sand topped at 3,329 feet. This well is in rank wildcat territory and came in for attention some time ago when the oil was encountered. It is expected the well will create a new interest in that section of Jack County and result in the starting of more deep wildcats.

Brown County

Brown County featured most of the news from the Ranger district which showed a decline in daily average as a result of a general decline in a number of older pools. The Clark-Buffalo Pool was extended to the southeast by Henshaw's No. 1 Bush, James Kinney Survey No. 624. The well is reported to be good for 200 bbls. at 1,110-22 feet. Another dry hole was added to those surrounding the pool when Preston and associates' No. 1 Bush was a failure at 1,334 feet.

Interest of operators in the Blake Pool of Brown County is being enlivened by the continued good producers being brought in in the north part of the pool. Gilman and McMurray brought in a 20-bbl.-per-hour well extending production one location west. The well is the north offset to a dry hole.

Several wildcats throughout the Ranger district are at depths where they should tell their stories within the next few days. Tests in the Ramsower Pool, 9 miles northwest of Ranger, are nearing interesting depths. One completion is expected in the latter pool some time during the coming week when it is expected to drill in the deep Ranger sand.

Operations in Coleman County are continuing to increase and at the end of the week around 65 operations were reported from that county. Roth and Faurot's No. 1 Sealy-Smith picked up a new gas sand when it encountered 10,000,000 feet of gas at 2,646-63 feet.

Throughout the Ranger district it is reported that more interest is being taken in the area. Many of the operators, it is reported, are confining their operations to sweet crude sections for the present or until the situation in West Texas shows improvement.

RANGER DISTRICT COMPLETIONS
Week Ending March 10

Brown County

Amerada Petroleum Corp.'s No. 5 Gilbreath made 50 bbls. at 1,334-45 feet. Central-Texas Refining Co.'s No. 4 Allcorn found the pay at 1,128-34 feet and made 236 bbls. Same company's No. 1 Bull made 16 bbls. at 1,134-47 feet. Cranfill & Reynolds' No. 3 Newton made 40 bbls. at 1,128-41 feet. Gilman & McMurray's No. 3 Hickman was shot with 20 quarts at 1,246-67 feet and made 800 bbls. Jay Hawk Oil Co.'s No. 1 Boyson made 40 bbls. at 1,243-48 feet. Same company's No. 2 Boyson made 60 bbls. at 1,242-51 feet. Pandem Oil Co.'s No. 6-B Curry was shot with 10 quarts at 1,107-16 feet and made 35 bbls. Syndicate Oil Co.'s No. 1 Hutton made 3 bbls. after a 3-quart shot at 1,123-26 feet. The Texas Company's No. 24 Hickman was shot with 20 quarts at 1,239-49 feet and made 800 bbls. H. P. Evans' No. 1 Galyan made 8 bbls. at 950-53 feet.

G. P. Mitcham's No. 1 Newton, Lot

(Continued on Page 157)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending March 10, 1928

Company, Well, Farm, Name, Section and Block—	Remarks—
ARMSTRONG COUNTY	
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H.&G.N. Sur.	S.D., 3,780 ft. for fishing tools.
BRISCOE COUNTY	
C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B.S.&F. Sur.	S.D., 1,620 ft.
CARSON COUNTY	
Amarillo Oil Co.'s No. 1 E. S. Polling, C NE of N 80 acres of NE, Sec. 12, Blk. Y-2, B.&B.	Drlg., 220 ft.
Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y	T. A., 2,110 ft.
Empire G. & F. Co.'s No. 1-A Texas Co. fee, C NE, Sec. 60, Blk. 4, I.&G.N. Sur.	Set 8-in. csg., 2,100 ft.
Empire G. & F. Co.'s No. 1 White Deer Inv. Co., C SE of Sec. 51, Blk. 4, I.&G.N.	Drlg., 2,130 ft.
Empire G. & F. Co.'s No. 1 J. C. Noel, C SW, Sec. 41, Blk. 4, I.&G.N. Sur.	Cellar.
Empire G. & F. Co.'s No. 1 E. W. Sheridan, C NE, Sec. 243, Blk. B-2, H.&G.N. Sur.	Location.
Marston Oil Co.'s No. 1 J. L. Noel	Drlg., 2,975 ft.
Skelly Oil Co.'s No. 8 H. Schafer, NE SW SW, Sec. 88, Blk. 4, I.&G.N. Sur.	Spudding.
The Texas Co.'s No. 1 W. H. Cobb, NE SE SE, Sec. 202, Blk. 3, I.&G.N. Sur. (Lease S 100 A SE)	Drlg., 2,070 ft.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 73, Blk. M-17, B.S.&F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur.	S.D., 510 ft. for csg.
CHILDRESS COUNTY	
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 736, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	Set 6-in., 2,902 ft.; S. D. 3,745 ft.
COTTLE COUNTY	
Exploration Co.'s No. 1 Richards	Spudded and S.D.
DALLAM COUNTY	
Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17	Hole full wtr., 4,007-4,127 ft.; S.D., 4,360 ft.
Marland Oil Co.'s No. 1 A. M. James, C SW W ½ Sec. 21, S. H. McElreath Sur.	S.D., 3,750 ft.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 36, Blk. 18, Capitol Synd. land	S.D., 3,500 ft.
DONLEY COUNTY	
A. T. Drlg. Co.'s No. 1 F. E. Harrington, Sec. 39, Blk. 3-C	1,200 ft. wtr., 3,115-22 ft.; show gas, 3,140-60 ft.; dry G.W., 3,-200-93 ft; T.D., 3,498 ft; U.R. for 5-in. csg. 30 ft. off bottom.
FLOYD COUNTY	
Explin. Co.'s No. 1 S. H. Boone, C. C. H. Johnson Sur.	Spudded and S.D.
Explin. Co.'s No. 1 Land & Cattle Co.	S.D., 730 ft. for orders.
Hoffer Oil Corp.'s No. 1 Nelson	Spudded and S.D.
GRAY COUNTY	
Archer Blake's No. 1 Turneaux, SW cor. Sec. 111, Blk. B-2	S.D., 255 ft.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B	T.D., 2,666 ft; S.L.M., shot with 10 qts. to loosen bit and 8-in. collapsed; S.D., 2,795 ft.
Biggs et al's No. 1 Morse, SW cor. Sec. 3, Blk. 26, H. &G.N. Sur.	Drlg., 815 ft.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 E. Williams, Sec. 17, Blk. 1	S.D., 3,860 ft.
Danciger O. & R. Co.'s No. 7 W. Jackson, Sec. 88, Blk. B-2, H.&G.N. Sur.	3,000 ft. T.D.; making 5,000,000 ft. gas from 2,779-3,000 ft. and 5 bbls. oil; stdzng., 3,000 ft.
Danciger O. & R. Co.'s No. 9 W. Jackson, NW cor. NE NW, Sec. 88, Blk. B-2	Drlg., 2,800 ft.
Danciger O. & R. Co.'s No. 10 W. Jackson, NE cor. NW NW, Sec. 88, Blk. B-2	Fish., 2,800 ft.
Danciger O. & R. Co.'s No. 1 W. Crank, SW cor. NW, Sec. 163, Blk. 3, I.&G.N. Sur.	Drlg., 450 ft.
Danciger O. & R. Co.'s No. 1 A. Chapman, SW cor. NW, Sec. 7, Blk. 26, H.&G.N. Sur.	U.R. 8¼-in. csg., 1,510 ft; 15,000,-000 ft. gas, 2,215-2,300 ft; drlg. 2,387 ft.
Danciger O. & R. Co.'s No. 1 C. W. Bradford, NE cor. SE, Sec. 123, Blk. B-2, H.&G.N. Sur.	Drlg., 2,387 ft.
Danciger Oil Co.'s No. 1 J. S. Morse, SE cor. NE SW, Sec. 2, Blk. 26, H.&G.N.	Drlg., 335 ft.
Delaney et al's No. 3 W. Jackson, SE cor. NE SW, Sec. 88, Blk. B-2	Drlg., 3,020 ft.
Delaney et al's No. 6 Jackson, SW cor. E half, SW, Sec. 88, Blk. B-2, H.&G.N. Sur.	Drlg., 2,965 ft.
Dillard et al's No. 1 Furney, NE cor. SE, Sec. 102, Blk. B-5, H.&G.N. Sur.	Location.
Donley Gray Oil Co.'s No. 1 J. W. Gordon, Sec. 79, Blk. 3	Wtr., 3,380 ft. and 3,430 ft; show oil; H.F.W., 3,650 ft; T.D., 3,-870 ft; U. R., 6-in. csg., 3,852 ft; drlg., 4,100 ft.
Delmar Oil Co.'s No. 1 F. Foster, NW cor. SW, Sec. 55, Blk. B-2, H.&G.N. Sur.	Building rig.
Edwards et al's No. 1 E. J. Case, NE cor. Sec. 182, Blk. B-2, H.&G.N. Sur.	70,000,000 ft. gas, 2,512-2,630 ft; top G.W., 3,034 ft; drlg., 3,183 ft; 2,000 ft. oil in hole.
Empire G. & F. Co.'s No. 1 E. J. Case, C NE, Sec. 180, Blk. B-2, H.&G.N. Sur.	Drlg., 2,430 ft.
Empire G. & F. Co.'s No. 1 S. A. Cobb, NW cor. NE, Sec. 64, Blk. 25, H.&G.N. Sur.	Cmt. 10-in. csg., 1,756 ft.
Empire G. & F. Co.'s No. 1 T. Cobb-"B," C NW, Sec. 178, Blk. 3, I.&G.N. Sur.	Rig on ground.
Empire G. & F. Co.'s No. 1 C. A. Bell, C SE, Sec. 134, Blk. 3, I.&G.N. Sur.	Drlg., 2,540 ft.
Empire G. & F. Co.'s No. 1 Bender, SE cor. Sec. 164, Blk. 3, I.&G.N. Sur.	Top lime, 2,507 ft; drlg., 3,150 ft; 200 ft. oil in hole, 3,145-50 ft.
Empire G. & F. Co.'s No. 1 A. J. Dauer, NW SE SE, Sec. 236, Blk. B-2, H.&G.N. Sur.	Set 12-in., 1,055 ft.
Empire G. & F. Co.'s No. 1 Holmes, C NE, Sec. 179, Blk. 3, I.&N.G. Sur.	Cellar.

(Continued on Page 83)

Hendricks Making Record for Big Wells

Production Gains 46,939 Bbls., Sending West Texas to New Peak. Water in Winkler Serious, but Output Climbs

By James H. Dameron
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Mar. 21.—Several records in West Texas were smashed or rather Hendricks in Winkler County soared to new heights in breaking records of that field. Coupled with those developments, the meeting held Saturday at Austin to search for a remedy of overproduction in West Texas, with its results, claimed most of the interest of West Texas operators.

Hendricks not only skyrocketed to a new peak but established a record for big wells in that pool and is believed by some to have established a record in big wells for the entire West Texas area.

West Texas production went to a new peak of 335,450 bbls.—a gain of 41,570 bbls. This was the result of the Winkler County Field gaining 46,939 bbls. daily to reach a new weekly peak of 169,693 bbls. On top of that another healthy climb was reported Monday when Sunday's gauge revealed the pool had gone over the top again to attain a new peak of 176,460 bbls.

Many operators are paraphrasing that song of not so long ago — "Let's Talk About My Sweetie" in discussing Hendricks. There is a whole lot to talk but none views the situation lightly and finds little pleasing in the way of curves and contours in view of the present situation in that field.

At the meeting in Austin the Railroad Commission was asked to appoint a committee of six operators to formulate a plan to cope with Hendricks—presumably a proration agreement. R. D. Parker, chief supervisor of the oil and gas division of that commission, will be chairman of the committee. The committee asked for time to give earnest consideration in the selection of such a committee.

Hendricks Operators to Meet

Viewing the Hendricks situation with concern, E. A. Landreth, Landreth Production Corp., Fort Worth, took the initiative in speeding up the work of the committee. He has called practically all of the operators in the Hendricks Pool and requested they be present at a meeting to be held in Fort Worth, probably Thursday, to discuss plans to submit to the committee. Those that have been approached have given assurance they will be present at the meeting. Late Monday afternoon all of the operators had not been reached but they are expected to be reached by Tuesday.

Most of the operators are urging immediate action of some kind to prevent a rapid drilling campaign being carried forward in the north end of the field. It was in this extended area that the record well of Hendricks was drilled making 11,600 bbls. through a 1½-inch choke with 1,100 pounds back pressure on the well. It is estimated by the owner's field superintendent the well would do 80,000 bbls. wide open. The figure is doubted by many, but, splitting that figure in two, it is still a mighty big well.

Since the completion of that well more than a score of locations have been made in that sector, all of which are likely to be drilled in the near future. It is the rapid development of this part of the field the operators hope to prevent at the present.

Mr. Landreth will probably present a plan calling for the drilling of two wells to each 80 acres. This plan is concurred in by the head of another large independent company with large holdings in Hendricks. In accordance with this plan the Landreth Production Co. has made a location in Section 40, Block 36. Many of the producers are opposed to any plan calling for the shutting in of the present producing wells.

At the Austin meeting W. S. Farish of the Humble Oil & Refining Co. told those attending the meeting the Humble company could not indefinitely maintain a higher price than that paid by the company's competitors. Considerable of the oil going to market from Hendricks is being sold under posted prices. Mr. Farish expressed the opinion that the industry has entered a new producing era and it will have overproduction to cope with for some time to come.

Venezuela May Be Curtailed

Underwood Nazro, vice president of the Gulf Production Co., made an important statement to the West Texas operators when he said that additional Venezuela crude would probably be shut in soon. Crude from that country is sold in direct competition to West Texas crude.

Two wells in Hendricks hold the key to the water situation to the field to a great extent. While the water situation in the pool is serious, at the present time most geologists hold the opinion that it will not affect the ultimate recovery of the pool and a great many are of the opinion that it will be the vehicle for a greater ultimate recovery. At present the water has encroached fairly uniformly, both vertically and horizontally, on the structure and pretty high up on it.

There is no doubt the structure will be longer than it is now and it is already more than 5 miles long. Some venture to say the field will probably extend north into New Mexico, not a continuous producing structure, but the trend will go on to the adjoining state.

However, many geologists hold to the opinion there is a saddle between the present producing area and the Amerada Petroleum Corp.'s No. 1 Walton, SW NW Section 48, Block 26. And, quite a few hold contrary views. If the Amerada corporation's well and Independent Oil & Gas Co.'s No. 1 McCabe, SE NW NW Section 36, Block B-5, prove the structure to be amazingly wide as well as long then the water situation becomes less serious.

Fifty-Five Wells Showing Water

Five wells on the west side of the structure were reported showing water Monday, which brings the total number of wells showing water to close to 55 wells. That figure is an estimate and probably is four or five wells high. But approximately half of the producers in the field are showing water and production continues to climb. One well in the field in particular is making a big volume of fluid, but the production of the well is around 1,200 bbls. daily.

The new wells showing water are: Gulf Production Co.'s No. 9 Hendricks, Section 34, Block B-5, 20 per cent b.s. and water; Southern Crude Co.'s No. 4-67-F Hendricks, Section 33, Block B-5, 10 per cent water; same company's No. 1-88-H, Section 28, Block B-5, 4 per cent water; Roxana corporation's No. 2-D, one-half of 1 per cent water, and Humble company's No. 6 Hendricks, Section 34, Block B-5, 12 per cent water. All of the wells are on the west edge of the structure.

Humble Oil & Refining Co. made a record in the field when its No. 8 Hendricks, Section 34, Block B-5, was drilled 710 feet below the top of the lime. At 3,035 feet the well topped a pay and flowed 200 bbls. The average depth of production is around 350 to 400 feet in the lime.

At the close of the week Winkler County had 95 wells drilling and 20 rigs or derricks that will go under the list of active operations. Locations and cellars total around 30.

Gibson and Johnson's No. 1 Leck, C SW Section 3, Block 74, Winkler County, and north of the Hendricks Pool, is one of the most closely followed tests in the county.

Saturated lime was cored from 2,690 to 2,702 feet and 8-inch casing has been cemented at 2,683 feet. This well is 3 miles west of the Roxana-Llano well, the farthest north producer in Winkler County.

Irion County Prospects

Irion County continues to be another area of promise through P. F. Hill and associates' No. 1 Horney, NE cor. Section 2, Block 3, H.&T.C. Survey. The well topped a pay at 1,270 feet and 1,170 feet of fluid rose in the hole. Nine bailers of live green oil, testing 36 gravity, was bailed from the top of the fluid column. At that time the hole was not bailed down for a water test. The fluid was reported to be of considerable water content.

The hole is open from 1,134 feet on down. Eight-inch casing was set at 1,134 feet. Six-inch casing with a perforated joint and a cave packer is being run and a test is expected to be made early in the week. Regardless of the outcome of the test it is expected the well will prompt the drilling of more wells in that section. While lease trade in that area has not been of a sensation nature, trading, nevertheless, has been brisk.

Cranfill & Reynolds and Sun Oil Co.'s No. 1 Young, NE cor. Section 208, Block 1, B.B.B.C.R.R. Survey, Fisher County, is to be deepened this week. The well showed for better than 100 bbls. in sandy lime pay at 3,106-18 feet. While casing was being underreamed to 3,100 feet it parted. The casing was pulled and set at 3,100 feet and big pipe was being pulled Monday preparatory to drilling deeper.

This well is approximately 3 miles east of The Texas Company's No. 1 Stevens, the first producer in Fisher County. The Texas Company's No. 1 Stevens encountered two pays and is producing 235 bbls. daily.

One of the disappointments in Crane County was the failure of Gulf Production Co.'s No. 3 Waddell, SE cor. NE Section 9, Block B-25, which was abandoned at 3,518 feet. Several failures were reported from widely scattered areas.

WEST TEXAS COMPLETIONS

Week Ending March 10

Andrews County

B. B. McKennon's (was Neff and others') No. 1 J. S. Means, C SE, Section 12, Block A-35, Public School Lands, was dry and abandoned at 3,375 feet. This test found the top of the salt at 1,930 feet.

Crane County

Gulf Production Co.'s No. 3 W. N. Waddell, SE cor. NE, Section 3, Block B-25, had the top of the lime at 3,050 feet, made sulphur water at 3,516-18 feet and was abandoned at the total depth of 3,518 feet. Same company's No. 47 J. T. McElroy had a show of oil and gas at 2,787 feet, was drilled to a total depth of 2,925 feet and made 135 bbls. Same company's No. 11 State-Lasseter was drilled to a total depth of 3,080 feet. The well was shot with 180 quarts at 3,023-80 feet and pumped 100 bbls. of 27.3 gravity oil. Location had been abandoned of the J. K. Hughes Development Co.'s No. 1 State Bank Commission described as the CSL, Section 18, Block 4, H.&T.C. Survey. Prairie Oil & Gas Co.'s No. 6 State Lasseter found the top of the pay at 2,865 feet and was drilled to a total depth of 2,975 feet and after a shot of 200 quarts at 2,865-2,975 feet the well pumped 75 bbls.

Crockett County

James Kelley and others' (was Corbett & Gill's) No. 1 Todd, C NE, Section 43, Block WX, G.C.&S.F. Survey, was dry and abandoned at 2,315 feet.

Culberson County

Deep Rock Oil Co.'s No. 1 J. P. Seay was dry and abandoned at 1,704 feet.

Howard County

Coyle-Concord Oil Co.'s No. 4 Dora

WILDCAT OPERATIONS IN WEST TEXAS

Week ending March 10, 1928

Company, farm and location—	Remarks—
ANDREWS COUNTY	
Deep Rock Oil Co.'s No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land, elev. 3,167 ft.	Hole full fresh water 1,050 ft.; top salt 1,690 ft.; shut down 2,770 ft. for casing.
BORDEN COUNTY	
Dixon Creek Oil Co.'s No. 1 Clayton & Johnson	Set 15½-in. casing 375 ft.; drlg. 700 ft.
Marland Oil Co.'s No. 1 G. E. McDavid, C SW Sec. 156, Blk. 25, H.&T.C. Sur., elev. 2,310 ft.	Top lime 2,410 ft.; set 8-in. 2,745 ft.; drlg. 2,810 ft.
Marland Oil Co.'s No. 1 Alexander Murphy, C SW Sec. 66, Blk. 25, H.&T.C. Sur. (3,250-ft. test)	Location.
BREWSTER COUNTY	
Cowden & Bowser's No. 1 Jackson & Harmon, C N half Sec. 1, Blk. 331	Skidding rig 50 ft. west.
J. M. Hickey's No. 1 Jackson & Harmon, NE cor. Sec. 182, Blk. 9, G.H.&S.A. Sur.	Drlg. 928 ft.
Mid-Kansas O. & G. Co.'s No. 1 Turney, Sec. 77, Blk. 213, T.&St.L. Sur.	Drlg. black shale 3,320 ft.
Reese & White's No. 1 Kimbale, C NE Sec. 204, Blk. 9, G.H.&S.A. Sur.	Shut down 1,475 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,700 ft.
Wilcox & Anderson's No. 1 Gage, Sec. 8, Blk. 300, T.C. R.R. Sur.	Drlg. 1,927 ft.
COKE COUNTY	
W. H. Brown et al's No. 1 W. L. Foster, SE cor. Sec. 142, Blk. 2, H.&T.C. Sur., elev. 2,222 ft.	Run 6-in. casing 3,180 ft.; drlg. 3,440 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H.& T.C. Sur.	Show oil 1,224-34 ft.; shut down lime 3,317 ft.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Total depth 2,736 ft.; shut down.
CONCHO COUNTY	
C. R. Dutton and Hughes Drlg. Co.'s No. 1 W. O. Shultz, Sec. 127, Blk. 72, T.&N.O.R.R. Sur.	Location.
Parks & Lawson's No. 1 Schultz	Show oil 925 ft.; shot with 40 and 30 qts.; no results; shut down 1,500 ft.
The Exploration Co.'s No. 1 Hartgrove, Blk. 240, J. Schouch Sur., elev. 1,718 ft.	Set 10-in. 760 ft.; shut down 940 ft.
Sartain Oil Co.'s No. 1 Evridge	Spudded and shut down.

(Continued on Page 104)

Roberts, Section 156, Block 29, W.&N.W. Survey, was drilled to a total depth of 1,873 feet and after a shot of 60 quarts at 1,847-68 feet the well swabbed 50 bbls. Magnolia Petroleum Co.'s No. 2 Dora Roberts found the pay at 2,974-86½ feet and swabbed and flowed 2,700 bbls. for 22 hours. Merrick & Lamb's No. 3 H. R. Clay, CSL SE NE, Section 126, Block 29, W.&N.W. Survey, pumped 30 bbls. at 1,734-79 feet.

Loving County

Lockhart Brothers' No. 1 fee, Section 85, Block 33, H.&T.C. Survey, has been temporarily abandoned at 2,260 feet.

Pecos County

George A. Henshaw and others' No. 1 B. T. Corder, C SW, Section 74, Block 2, C.C.S.D. Survey, found the top of the salt at 1,130 feet and was abandoned at 2,517 feet. Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s No. 12 I. G. Yates-B, Section 61, Block 1, found the pay at 1,252-1,333 feet and made 602 bbls. per hour.

Reeves County

World Oil Co.'s No. 1 Biggs, C SE. Section 65, W. N. Holder Survey, had a hole full of water at 3,006 feet and has been abandoned.

Schleicher County

Thomas Grey and others' No. 1 Ball Robinson was dry and abandoned at 3,507 feet.

Tom Green County

Marland Oil Co.'s No. 1 J. W. Jhonson, C SE, Section 6, R. B. Sanderson Survey, was dry and abandoned at 3,461 feet, steel line measurement.

Winkler County

Atlantic Oil Producing Co.'s No. 3 Grisham-Hunter, Section 34, Block 5, found the top of the pay at 2,825 feet with increases in production at 2,885 feet and 3,008-12 feet where the well made 40 bbls. per hour. It was drilled to a total depth of 3,050 feet and after a 300-quart shot at 2,945-3,050 feet made 134 bbls. per hour. Same company's No. 4 Grisham-Hunter, Section 34, Block B-5, found the top of the pay at 2,962 feet and was drilled to a total depth of 3,048 feet with an initial production of 70 bbls. per hour. This well was shot with 160 quarts at 2,935-3,015 feet and made 125 bbls. per hour. Same company's No. 1 Ida Hendricks topped the pay at 2,830 feet and bottomed at 2,936 feet with an initial production of 180 bbls. Atlantic and Collett's No. 1 Ida Hendricks-F, NE cor. W half NW, Section 40, Block 26, found the top of the salt at 1,984 feet, top of the lime at 2,438 feet, top of pay at 2,740 feet and was drilled to a total depth of 2,764 feet with an initial production of 3,130 bbls. pinched. This well is increasing.

Cranfill & Reynolds' No. 1 Ida Hendricks-C, SE SW SW, Section 33, Block 26, topped the pay at 2,733 feet with an initial production of 11,600 bbls. pinched through a 1½-inch choke with 1,100 pounds back pressure. The well has not been drilled deeper. Pure Oil Co.'s No. 1 Hendricks-B, NE cor. SE. Section 34, Block B-5, found the top of the salt at 1,395 feet, top of lime at 2,276 feet and has been temporarily completed as a 50,000,000-foot gas well at 2,350-2,716 feet. Southern Crude Oil Purchasing Co.'s No. 2 Hendricks 3-T-68-A, has been temporarily completed as a 75,000,000-foot gas well at 2,470-2,730 feet. Same company's No. 2 Ida Hendricks T-88-B found the big pay at 3,050 feet and was drilled to a total depth of 3,055 feet with an initial production of 240 bbls. per hour, 34 per cent water and 8 per cent b.s. Same company's No. 1 Ida Hendricks T-88-I, SE cor. E half NE, Section 30, Block B-5, topped the pay at 2,940 feet and bottomed at 3,050 feet with an initial production of 1,515 bbls. Texon Oil & Land Co.'s No. 1 Grisham-Hunter-B, NW cor. W half SW, Section 45, Block 26, topped the pay at 2,863 feet and bottomed at 2,970 feet with an initial production of 6,875 bbls. Same company's No. 2 Grisham-Hunter-B, NE cor. W half SW, Section 45, Block 26, topped the pay at 2,810 feet and bottomed at 3,022 feet. The well had an initial production of 2,110 bbls. and was shot with 300 quarts at 2,942-3,022 feet and made 3,725 bbls.

WEST TEXAS

Estimated Daily Average Production for the Week Ending March 10

Crane County	74,588
Crockett County	2,740
Ector County	11
Fisher County	230
Glasscock County	S. D.
Howard County	4,070
Jones County	1,263
Loving County	120
Mitchell County	3,380
Pecos County	45,037
Reagan County	19,669
Runnels County	163
Scurry County	45
Upton County	14,441
Winkler County	169,693
Total this week	335,450
Total last week	293,880
Increase	41,570

WEST TEXAS

Daily Average Production by Leases for the Week Ending March 10

Crane County

Company and Lease—	Wells	Bbls.
Church et al:		
University	1	101
Church & Weekley:		
University	3	1,033
Church & Fields:		
Duoll-Universi.y	1	129
Eastland Oil & Collett:		
University	8	3,931
Gulf Prod. Co.:		
All leases	67	18,082
Humble O. & R. Co.:		
University	13	4,554
Independent O. & G. Co.:		
University-A	5	1,039
University-B	2	1,007
Landreth Prod. Corp.:		
Cowden-Anderson	16	7,588
Magnolia Pet. Corp.:		
University-Hardwicke	14	2,762
University-O'Keefe	12	794
State-Lasseter	3	235
Magnolia et al:		
University	4	54
Pecos Oil Co.:		
University	16	4,021
Prairie O. & G. Co.:		
Universi.y	5	*391
State-Lasseter	7	*10,517
Simms & Atlantic:		
University-A	9	*2,502
University-B	1	61
University-C	8	*4,265
University-D	12	*4,679
University-E	1	169
Stidham & Thrasher:		
University	1	10
The Texas Company:		
University	1	212
University-Beasley	1	30
Tidal Oil Co. et al:		
University-B	2	15
University-C	1	30
Universi.y-E	1	73
University-F	7	*2,031
University-G	3	*416
University-H	2	23
University-I	8	*3,904
Total Church & Fields-McElroy Pools	235	74,588
Average per well		317.4

Miscellaneous Crane County

Gulf Prod. Co.:		
Waddell	1	25
Independent O. & G. Co.:		
Hughes	1	5
McMan O. & G. Co.:		
Hughes	2	64
Marland Oil Co.:		
All leases	14	570
The Texas Company:		
King	9	213
Union Land-F	1	6
Miscellaneous total	28	884
Grand total Crane County	263	75,472
Average per well		290.8

Pecos County

Pandem Oil Co.: et al:		
Pecos River Bed	6	279
California Oil Co.:		
Yates, Lease 1	12	3,372
Smith, Lease 1	1	78
Smith, Lease 3	11	3,465
Gulf Prod. Co.:		
All leases	11	6,819
Humble O. & R. Co.:		
M. A. Smi.h	6	1,212
M. A. Smith-B	4	1,237
Kirby Pet Co. & Edson:		
J. H. Tippett	1	213
Marland Oil Co.:		
Yates-A	10	957
Mazda & Savoy Oil Co.:		
M. A. Smith	1	240
McMan & Marland:		
Yates	15	3,472
McMan O. & G. Co.:		
J. H. Tippett	2	582
Mid-Kansas & Transcontinental:		
Yates-A	15	3,171
Yates-B	23	3,545
Yates-C	9	2,286
Yates-D	2	134
Yates-E	1	99
Yates-F	1	364
Smith	2	77
Sml.h-Taylor	10	5,933
Phillips Pet. Co.:		
Smith	1	98
Red Bank Oil Co.:		
Smith	2	444
Roxana Pet. Corp.:		
Tippett	7	2,955
Smith	5	1,066
Simms Oil Co.:		
Smith	6	2,889
Texon O. & L. Co.:		
Yates	2	0
Total Yates Field	165	45,037
Average per well		273

Winkler County

Atlantic O. P. Co.:		
Grisham-Hunter	4	7,935
Grisham-Hunter-E	1	4,012
Ida Hendricks	1	335
Ida-Hendricks-C	2	*3,082
Atlantic & Colle.t:		
Ida Hendricks-F	1	4,781
Cranfill & Reynolds:		
Ida Hendricks	2	4,115
Grisham-Hunter-B	1	135
Hendricks-C	1	11,233
Gulf Prod. Co.:		
T. G. Hendricks	8	13,642
Humble O. & R. Co.:		
Grisham-Hunter	4	19,267
Ida Hendricks-B	3	4,452
Independent O. & G. Co.:		
Grisham-Hunter	6	*7,265
Grisham-Hunter-B	1	*2,179
Hendricks	1	30
Ida Hendricks-B	1	362
Landreth Prod. Corp. & Roxana:		
Grisham-Hunter	2	5,985
Ida Hendricks-A	3	7,523
Magnolia Pet. Co.:		
Ida Hendricks	6	4,346
Murchisor & Cranfill Bros.:		
Grisham-Hunter	2	165
Grisham-Hunter-C	1	105
Grisham-Hunter-B	1	685
Republic Prod. Co.:		
Grisham-Hunter-A	1	5,365
Grisham-Hunter-B	1	60
Roxana Pet. Corp. et al:		
Scarborough	1	30
Roxana Pet. Corp.:		
Grisham-Hun.erA	2	*5,219
Grisham-Hunter-D	2	*3,240
Ida Hendricks-B	2	3,062
Ida Hendricks-C	5	*11,406
Southern Crude Oil:		
T-67 Hendricks-A	1	235
T-67 Hendricks-C	5	2,760
T-67 Ida Hendricks-B	1	550
T-67 Hendricks-F	3	3,038
T-68 Ida Hendricks-A	1	9
T-88 Ida Hendricks-A	1	815
T-88 Hendricks-B	2	6,373
T-88 Ida Hendricks	6	2,666
T-88 Ida Hendricks-H	1	2,200
T-88 Ida Hendricks-I	1	1,605
Texon O. & L. Co.:		
Grisham-Hunter-A	1	*2,670
Grisham-Hunter-B	2	6,875
Pure Oil Co.:		
Grisham-Hunter	3	3,685
Grisham-Hunter-B	2	1,525
Turman et al:		
Ida Hendricks	6	4,743
Total Winkler County	102	169,693
Average per well		1,663.6

*Pinched in.

Late News from the Field

WEST TEXAS

FORT WORTH, Tex., Mar. 13.—Hendricks Pool's new peak is 187,516 bbls.

In the Panhandle, Delaney and associates' No. 6 Jackson, Section 88, Block 2, made 2,100 bbls. in 24 hours at 2,965-66 feet, and showed 1 per cent b.s. and water.

Hill and associates' No. 1 Horney in Irion County swabbed 5 bbls. of oil and 70 bbls. of water.

Raney and associates' No. 2 Mabry, Section 56, Block 1, H.&T.B. Survey, Fisher County, is showing oil and water from a total depth of 3,031 feet. Casing is being underreamed.

In Winkler County, the plug is being drilled in Gibson and Johnson's No. 1 Leck, C SW Section 3, Block 74, at 2,683 feet; shut down for a few days. To the east of production Southern Crude Oil Purchasing Co.'s No. 1 T-90 Hutchins, Section 47, Block 26, cored sandy lime at 2,680-86 feet and a bleeding core at 2,690 feet.

GULF COAST

HOUSTON, Tex., Mar. 13.—New dome production was opened in South Louisiana when Rycade Oil Corp. brought in its No. 2 Atchafalaya fee, SE cor. SW NE of Section 13-9s-8e, on the Bayou Bouillon Dome, St. Martins Parish, flowing 4,000 bbls. daily of pipe line oil through three-quarter and one-quarter inch chokes. Production, the first on that dome, is from a sand at a total depth of 3,044 feet. This is the second test drilled by the Rycade. Rycade owns the dome acreage in fee. This is the second field opened within 40 miles of Baton Rouge within the past month, the other being Sorrento, Ascension Parish. Bayou Bouillon is almost due west of Baton Rouge. No. 2 Atchafalaya was shut in Tuesday pending the erection of storage. Tests of the oil made late Monday showed it to be 28.5 gravity.

The Texas Company's No. 1 Green, which extended the South Liberty Field a mile north when it came in two weeks ago flowing initially more than 2,000 bbls. daily, and which last week stopped flowing, Tuesday was being rigged up to be put on the pump. The hole, which is at a total depth of 2,288 feet, is full of oil, but there is no pressure to flow the well. It first was thought the well had sanded up.

The Pierce Junction Field of Harris County got a slight footage extension in Rio Bravo Oil Co.'s No. 2 G.H.&S.A., which came in flowing around 1,450 bbls. from sand at a total depth of 4,445 feet.

NORTH LOUISIANA-ARKANSAS

SHREVEPORT, La., Mar. 13.—Simrall and others are believed to have found a new and deeper sand in the Champagnolle district of Union County, Arkansas, with No. 1 Finley, Section 12-17-14, 2 miles south and east of nearest production. Drill stem test of 5 feet of sand at 3,167-72 feet showed for 10,000,000 feet of gas and a spray of oil and 6⅝-inch casing is being run for a standard test. Top of this sand is 175 feet below the Crain sand from which the discovery wells are producing. The semiwildcat was dry in the 2,700-foot sand wells to the west are producing from, got salt water at 2,915 feet and was dry in the 3,000-foot pay in the discovery well.

Benson Oil Co.'s No. 2 Wolff, Section 3-10-13, DeSoto Parish, has been closed in as a 14,500,000-foot gasser. Location of the wildcat is 1,100 feet northwest of No. 1 on the same lease which is pumping and flowing 62 bbls. high gravity oil 84 days after completion as a 40-bbl. pumper. Gas from No. 2 is exceedingly rich in gasoline and is coming from 28 feet of broken formation at 3,032-64 feet, 16 feet higher than No. 1. Initial rock pressure is 1,300 pounds.

EAST CENTRAL TEXAS

MEXIA, Tex., Mar. 13.—Two more tests which for a short time looked promising have been abandoned. They are Barney Carter's No. 1 McMasters, Pyle Survey, Kaufman County, which tested salt water at 2,685 feet and Humble Oil & Refining Co.'s No. 1 Hoovenberg & Anderson, Nancy Childs Survey, Smith County, junked and abandoned after a bad fishing job. This test was in anhydrite at 550 feet and was believed to indicate the presence of a salt dome below.

OKLAHOMA

The Greater Seminole area produced 300,025 bbls. for the 24 hours ending 7 a. m. Tuesday of this week. The output by pools was:

	Bbls.
Little River	40,714
Bowlegs	84,346
Earlsboro	100,518
Seminole	56,172
Searight	18,275
Total (from 1,084 wells)	300,025

The most interesting well in the south country at this time is the McCulloch Oil Co. and Mid-Continent Petroleum Co.'s No. 1 Smith, NW cor. SE Section 25-7-4, which is being drilled deeper 1 foot at a time. The well had been making 1,800 bbls. daily and was drilled to a total depth of 4,175 feet; it responded with an increase to 1,935 bbls. On Monday of this week, it was again drilled 1 foot deeper to a total depth of 4,176 feet, and made 2,049 bbls. in 24 hours.

It is producing from the Simpson sand or the top of the Wilcox, there being some discussion about the origin of the oil. The majority seem to favor the thought that the oil is coming from the Simpson sand. It is now reported that all owners of leases in this area have agreed to the ruling of the committee that the McCulloch-Mid-Continent well will be allowed to produce to full capacity until the offset wells are completed, at which time all the wells will be limited to an output of 100 bbls. daily.

South of the Little River Pool, the Independent Oil & Gas Co. and Highway Oil & Refining Co.'s No. 1 Harris in Section 23-7-6 is holding up nicely and flowing 2,844 bbls. without deeper drill-

(Continued on Page 160)

(DUNN TOOLAGRAM)

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Seminole Dropped Below 300,000 Bbls

Production Topped That Figure Next Day, However. Action of Government in Osage Sale Elicits Comment

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

Greater Seminole dropped below 300,000 bbls. daily for the first time since last April, on Friday of last week when the output was 298,734 bbls. The Saturday output was 303,127 bbls. The decrease was caused primarily by trouble experienced on two leases in the Earlsboro Pool. The news that several tracts offsetting producing wells in the Naval Reserve area of Osage County, south of the Burbank Field, would be offered for lease at the coming Osage sale, caused considerable comment, and for a time threatened to completely destroy the Seminole shutdown agreement which is effective for 150 days from March 1. There has been some dissatisfaction among the producers on account of the activity of the drill in Osage County, chiefly in the Burbank Field. While the remainder of the Oklahoma fields have been only moderately active, and the Seminole pools have been the subject of plans designed to protect the industry from a sudden flood of crude, Burbank has progressed unchecked. Adding the Naval Reserve tracts to the proposed sale seemed to be the last straw, and the producers have protested to the Secretary of the Interior.

Latest news on the situation is that the sale will be held, but efforts will be made to limit the output of any wells found in the Naval Reserve under a plan similar to the one which was used to control the Burbank Field in 1923.

The appearance of water in both of the wells on the Naval Reserve in the Osage was another bit of news which will further complicate the proposed sale, and which will unquestionably chill the ardor of bidders for the offset leases. These two wells (previously reported) are Kay County Gas Co.'s No. 1, in Section 9-23-7, and No. 2 in Section 22-24-7. The former well is making one bailer of water an hour from sand 2,993-3,004 feet, and is also swabbing 175 bbls. of oil daily. The latter has a total depth of 2,899 feet, and is cutting three-quarters of 1 per cent. The producing strata in these wells is thought to be the Siliceous lime, but has never been fully determined.

Greater Seminole Activities

The drilling activity in Greater Seminole continues to decrease in spite of the nine new wells (test wells) at Little River. A detailed list of operations in that area is given below.

	Little River	Semi-nole	Sea-right	How-legs	Earls-boro
Locations	2	0	1	1	3
Rigs	17	0	1	11	10
Drilling less than 2,000 ft.	1	0	0	2	2
3,099 ft.	2	0	0	5	5
3,700 ft.	0	0	0	2	2
Below 3,700 ft.	9	1	3	17	10
Total	31	1	5	38	32

More Crooked Holes

Another story of crooked holes in Seminole was brought out last week when two more wells ran together. The Roxana Petroleum Corp.'s No. 2 Hearn and the Prairie Oil & Gas Co.'s No. 6 Davis in the Earlsboro Pool had an underground collision. The former was 2,750 feet when the accident occurred, and the Davis well had reached a depth of 3,540 feet. Both holes will probably be abandoned. More expense.

In the Pearson Switch-St. Louis area, the McCulloch Oil Co. and the Mid-Continent Petroleum Corp.'s No. 1, NW cor. SE Section 25-7-4, continues to hold up well and is making better than 1,500 bbls. daily. Jurisdiction of the Seminole committee applies to this well, and under an agreement reached between operators having holdings in this territory, the well will be produced to capacity until the offset wells reach the sand, when all wells in this region will be shut in. The McCulloch-Mid-Continent well produced from the Simpson sand immediately above the Wilcox horizon, and has a total depth of 4,179 feet.

One mile northwest of the McCulloch-Mid-Continent well, Westheimer & Daube and the Gypsy Oil Co. have a well in No. 2 Sullivan, NW cor. SW NE Section 23-7-4. This well is swabbing 290 bbls. daily from the Viola lime found 4,155-4,196 feet. The Viola seems destined to produce all over the Hunton arch region of Pottawatomie County, although the majority of the wells have been of limited yield.

In the Beebe district of Pontotoc County, the Indian Territory Illuminating Oil Co. has a well in No. 1 Taylor, NW cor. SW SE Section 29-5-5. This well had what is probably the Hunton lime 2,295-2,300 feet, and made several good flows. Owing to the absence of tankage, estimates only are available, and the well seems good for 200 bbls. It is an offset to a producing well completed some months ago.

Allen Pool

The most important news from the Allen Pool of Pontotoc-Seminole Counties was the finding of oil in the Ramsay Brothers' No. 1 Hulwa, SE cor. NE Section 7-5-8, which has 600 feet of oil in the hole from sand 2,675-94 feet, and is estimated at 90 bbls. as it stands. It will be drilled deeper. This well is directly between two dry holes drilled by the Louisiana Oil Refining Co., one to the east and one to the west. Both of the dry holes had good showings of oil when the sand was cored, but they were drilled into water.

The Ramsey well is one-half mile west of the Mid Continent Petroleum Corp. well reported last week, and extends the activity of the west side of the Allen Pool in a northeasternly trend. There is ample area for good production northeast of the Hulwa well.

In the Lovell area of Logan County, deeper drilling increased the flow of the Roxana Petroleum Corp.'s No. 1 Freelove, SW cor. SW Section 17-19-4w. This well now has a total depth of 6,103 feet, and is making 2,853 bbls., placing it as the best well in the pool by a wide margin.

Seminole Production

Production of the Seminole pools by companies and leases on Thursday, March 8, is given below:

Little River

Company, farm—	Wells	Prod.
Amerada:		
Nitey	3	2.965
Amerada et al:		
Fore	2	1.040
Barnsdall:		
Hotulke	1	50
Blackwell:		
Nitey	6	2,648
Carter:		
Fish	5	1,655
Jackson	1	805
Continental:		
Cosar	3	500
Gypsy:		
Brown	1	50
Campbell	2	117
Nungee	1	42
Pottey	3	515
Renton	..	....
Independent:		
Harris	1	2,597
Independent et al:		
Davis	2	1,821
Indian Territory:		
Campbell	1	113
Dungan	3	2,541
House, M. A.	1	304
House, W. E. "A"	1	38
House, W. E. "B"	3	1,613
Jackson	3	2,172
Hull	1	91
McCulla	3	959
Nitey	7	1,592
Phoebe, "A"	3	791
Phoebe, "B"	4	328
Reed	1	128
Soketheche	4	1,067
Magnolia:		
Cruse	1	600
Dixon	1	53
Pottey	3	465
Mid-Continent:		
Smith	1	35
Wadsworth	7	1,025
Pine & Phillips:		
Pottey	2	1,180
Prairie:		
Dungan	2	140
House	4	2,105
Roxana:		
Smith	1	10
Shaffer:		
Narcome	1	105
Sinclair:		
Cosar	2	1,745
Snowden et al:		
Tiger	1	3,572
Superior:		
Wadsworth	1	16
Texas:		
Coker	3	620
Tidal:		
House	3	1,285
Johnson	1	75
Total	100	39,573

Maud

Barnsdall:		
Fife	1	....
Indian Territory:		
State	1	....
Total	2	....

Bowlegs

Amerada:		
Rasco	8	2,280
Atlantic:		
Baker	4	584
Fleet	4	520
Grayson	3	675
Jones, A.	3	165
Jones, C.	2	244
Barnsdall:		
McNac	1	50
Murrow	4	759
Carter:		
Bowlegs	4	1,440
Burden	3	290
Harjoche	6	825
Hilly	3	1,005
Jones	4	1,646
McGeisey	1	15
Melisse	1	215
Walker	4	675
Wise	12	3,810
Empire:		
Lacy	6	662
Wise	2	570
Gypsy:		
Bowlegs	1	70
Bradley	1	....
Cumsey	4	1,322
Dosar	1	100
Grayson	4	897
Harjoche	2	3,675
Jones	1	347
Walker	8	2,050
Wise	2	317
Indian Territory:		
Barnett, "A"	2	219
Barnett, "B"	1	215
Billington	5	882
Bowlegs	11	1,902
Davis	4	1,377
Fay	9	2,445
Goforth	12	1,689
Livingston	11	3,598
Lizzie	2	527
Walker	8	985
Wilmont	4	753
Work	1	124
Youngblood	2	124
Magnolia:		
Davis, B. F.	3	584
Davis, M.	1	201
Hammond	3	430
Rhoades	1	4,310
Van Buskirk	2	201
McColloch:		
Bowlegs	2	360
Mid-Continent:		
Baker	4	1,705
Bowlegs	1	25
Smithe	6	690
Minnehoma:		
Bowlegs	4	325
Prairie:		
Gahagan	4	520
Harber	8	2,795
Jones	4	450
Templeton	6	2,755
Whitney	4	520
Pure:		
Reed	15	3,194
Strothers, "D"	4	573
Strothers, "F"	4	995
Roxana & Houston:		
Taylor	5	1,022
Shaffer:		
Lacy	3	490
Sinclair:		
Bowlegs	1	....
Cumsey	4	4,945
Ellen	7	1,637
Harjo	3	565
Jones	6	4,620
Taylor, M.	4	2,909
Taylor, W.	1	1,683
Walker	4	940
Texas:		
Reed	11	3,150
Tidal:		
Grayson	4	965
Harjoche	6	2,185
Twin States:		
Jones	3	132
Total Bowlegs	311	85,939

Earlsboro

Amerada:		
Anderson	2	1,485
Cowden	8	1,775
Rodgers	2	1,220
Barnsdall:		
Brown	4	1,685
Bruner, F.	2	761
Bruner, N.	4	1,522
Cudjo, C.	1	27
Davis, D.	4	1,338
Davis, J.	4	843
Davis, M.	3	140
Gibson	8	2,733
Hearn	1	6
Ingram	7	3,624
Pack	4	214
Peter	4	217
Sango	3	6,834
Sebolka	1	676
Sullivan, H.	2	....
Sullivan, Harjo	2	60
Wasutke	4	1,900
Carter:		
Davis	2	540
Payne	3	140
Sango	4	2,725
Continental:		
Kays	2	20
Spencer	4	1,130
Crosbie:		
Bryant	2	....
Empire & Routt:		
Barker	1	1,380
Empire:		
Edmundson	3	1,210
Gypsy:		
Boro	1	....
Bruner	1	2,832
Carter	10	3,650

WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

GRANT COUNTY

Otstot Development Co.'s No. 1 Snyder, NE cor. NE Sec. 4-28-3w ..... Shut down 4,518 ft.

J. V. Bailey and others' No. 1 Maddox, C SE Sec. 13-27-5w ..... Shut down 4,842 ft.

Thraves and others' No. 1 C. D. Fuss, SW cor. NW NW Sec. 30-27-4w ..... Shut down 1,230 ft.

Burns & Beasley's No. 1 Bolsterton, SW cor. NW SW Sec. 24-27-3w ..... Rig.

Brazil & Moses' No. 1 Goutier, SW cor. NW Sec. 34-26-4w ..... Shut down for pipe 650 ft.

Lambert and others' No. 1 Tabor, SE cor. NE SE Sec. 23-26-3w ..... Spudded and shut down.

Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w ..... Fishing 5,640 ft.

HARPER COUNTY

Kopisch Oil Co.'s No. 1 Johnson, NE cor. SE Sec. 24-27-21w ..... Rigged up and shut down.

Hoffer Oil's No. 1 Cooper, NW cor. SE SE Sec. 12-25-22w ..... Shut down 4,130 ft.

WOODS COUNTY

Sooner State Oil Co.'s No. 1 Marcum, C SW Sec. 20-27-15w ..... Spudded and shut down.

Victor Oil Co.'s No. 1 Buskirk, SW cor. SE Sec. 19-26-15w ..... Hole full wtr., 775-800 ft; S.D. 900 ft.

McCray Oil & Gas Co.'s No. 1 Whitney, NE cor. NW SE Sec. 19-24-14w ..... Shut down 1,880 ft.

KAY COUNTY

Boucher and others' No. 1 Cooper, SE cor. SE Sec. 23-27-2w ..... U. R. casing 1,485 ft.

Ponca Lee Oil's No. 1 McNeil, NW cor. NE Sec. 32-26-2e ..... Shut down 2,795 ft.

Tonkawa Development Co.'s No. 1 McDaniels, SE cor. SE Sec. 15-25-1w ..... 500,000 ft. gas; 3,980-88 ft.; shut down 4,475 ft.

Corley and others' No. 1 Williams, SE cor. NE SW Sec. 7-21-1w ..... Shut down for casing 1,930 ft.

(Continued on Page 120)

TRANSIT PUMPS

Figure No. 1700 is a very popular type in the smaller refineries.

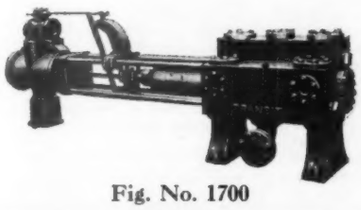

Fig. No. 1700

Our name TRANSIT, is a guarantee now just as it has always been for the past forty years.

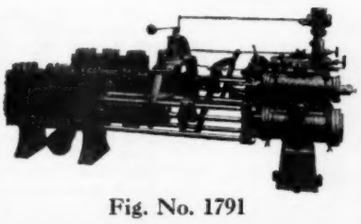

Fig. No. 1791

Real, honest-to-goodness, forged steel cylinders on all types.

Fig. No. 1733

Heavy, cast iron, flanged steam cylinder piping and real brass globe valves.

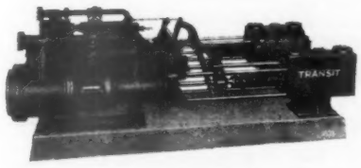

Fig. No. 1571

Oil in exact quantities is delivered per minute, per hour and per day by TRANSIT Hot Oil PUMPS.

Fig. No. 1805

The discharge from any of these pumps is steady and constant.

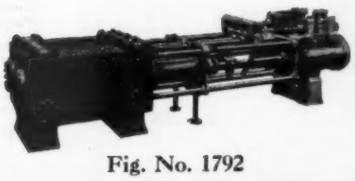

Fig. No. 1792

Our hot oil pumps are absolutely safe in operation, both to life and property.

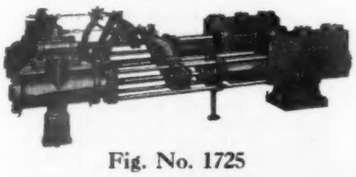

Fig. No. 1725

Illustrated descriptive matter on any type or Fig. No. furnished promptly.

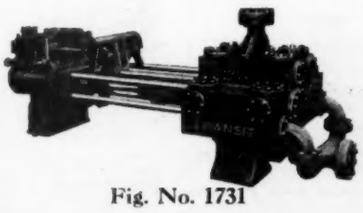

Fig. No. 1731

Long stroke pumps are long lived.

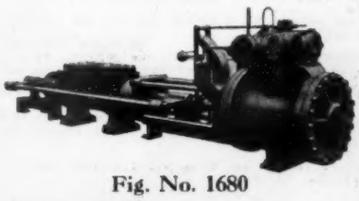

Fig. No. 1680

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FRICK-REID SUPPLY COMPANY
Tulsa, Okla., or any store.

ASSOCIATED SUPPLY COMPANY
Los Angeles, San Francisco, Bakersfield, Fellows

E. L. WILSON HARDWARE CO.
Beaumont, Texas.

NATIONAL TRANSIT Pump & Machine Co.
Oil City, Pa.

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NEW YORK PHILADELPHIA PITTSBURGH
CLEVELAND HOUSTON TULSA LOS ANGELES

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F. C. RICHMOND MACHINERY CO.
Salt Lake City, Utah.

MORTON McI. DUKEHART & CO.
Baltimore, Md.

REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Earl	1	17
Hunick	1	2,132
Noble	4	3,762
Peter	3	205
Sango	5	5,757
State	4	1,300
Independent:		
Bruner	4	117
Sullivan	4	160
Knapp	3	2,590
Gaines	5	1,240
O'Dell	1	....
Inter-Ocean:		
Payne	1	....
Magnolia:		
Bryant	6	2,489
Cowden	4	80
Dixon	1	....
Edmundson	3	42
Holmsley	8	2,174
Hyde	1	....
Ingram	1	30
Lena	3	80
Seay	9	3,846
Simpson	3	258
Sparks	7	2,100
Sullivan	3	16
Mid-Continent:		
McCumber	7	415
Mid-Kansas:		
Anderson	3	180
Phillips:		
Dunnaway	1	40
Graham	4	220
Prairie:		
Baker	1	50
Davis	5	3,485
Graham, C.	2	50
Graham, O.	4	2,125
Stidham	13	4,040
Roxana:		
Bayliss	1	14
Spencer	2	1,942
Shaffer:		
Clark	6	1,541
Sinclair:		
Foreman	1	15
Hollins	3	255
Sango	2	4,100
Skelly:		
Spencer	1	808
Texas:		
Anderson	6	850
Brown	8	2,400
Rodgers	4	4,542
Wilmont	7	3,177
Tidal:		
Watkins	8	2,960
Twin State:		
Barker	4	125
Hearn	4	2,500
Total Earlsboro	287	105,212

Seminole

Carter:		
B. Carter	2	175
J. Carter	3	35
F. Carter	3	115
Creamer	2	30
R. Cudjo	4	205
W. Cudjo	2	30
Gilliland	1	295
Grisso, M.	1	265
Grisso, W.	5	550
Knapp	3	53
Killing, M.	12	6,500
Killing, G.	4	415
Lukes	6	1,380
Ponder	2	50
Simpson	3	60
Strother	4	425
Vierson	3	375
Amerada:		
Fixico	4	620
Killing	4	599
Rentie	3	698
Atlantic:		
Cudjo, N.	3	560
Barnsdall:		
Carter	8	1,838
Henry	2	532
Jones	4	1,150
Empire:		
Gross	3	85
Wilson	2	248
Gypsy:		
Butler	4	917
Carter	8	325
Cudjo	5	440
Fixico	7	210
Harjo	2	640
Wolf	6	205
Independent:		
P. Fixico	3	255
Independent & McCulloch:		
Davis	3	835
Harjo	3	150
Independent & Garland:		
T. Fixico	8	714
Independent & Interocean:		
Jones	4	492
Indian Territory:		
Allen	2	451
Bowlegs	12	2,700
Gooden	4	370
Harjo	3	117
James	2	293
Reed	2	17
Kingwood:		
Johnson	3	1,275
Magnolia:		
Born	1	40
Franks	4	826
Mid-Continent:		
Rentie	9	1,215
Tayeche	7	290
Mid-Kansas:		
Wilkins	2	41
Phillips:		
Strothers	2	140
Prairie:		
Gross	5	125
Mason	1	80
Spencer	1	12
Strother	8	1,915
Pure:		
Strother A	17	6,083
Strother B	5	2,134
Strother C	1	260
Roxana:		
Harber	2	282
Leahley	2	33
Sinclair:		
Carter	2	28
Cudjo, A.	6	325
Cudjo, B.	4	1,090
Dicey	2	1,375
Fixico	4	700
Slick:		
Cudjo	3	740
Franks	6	1,363
Giblet, Sam	3	2,007
Tiger	1	71
Superior:		
Cudjo	4	588
Texas:		
Mayhue	1	300
Strothers	1	125
Tidal:		
Carter	4	757
Fixico	6	754
Harjo, D.	3	715
Harjo, T.	7	195
Mahardy	2	78
Turman:		
Cudjo	4	1,262
Grisso	1	394
Jones	4	849
Total Seminole	310	54,959

Searight

Carter:		
Davis	7	825
Frazier	6	2,820
Johnson	1	5
Kiker	1	30
Mandler	2	30
Scott	1	20
Amerada:		
Johnson	1	80
Strother	2	1,262
Prairie:		
Varnum	1	105
Gypsy:		
Cudjo	3	697
Mid-Continent:		
Grayson	6	30
Soloche	4	1,950
Pine:		
Lulla	1	35
Prairie:		
Cannon	1	10
Carter	1	20
Houck	1	5
Kincaid	5	75
Wiemer	1	20
Pure:		
Aldridge	6	2,373
Roxana:		
Strother	4	3,034
Sinclair:		
Polly	4	1,670
Superior:		
Varnum	1	62
Texas:		
Fleet	1	42
Twin State:		
Varnum	2	352
Wilcox:		
Chupco	8	2,589
Total Searight	71	18,141
Total Little River	100	39,573
Total Bowlegs	311	85,919
Total Earlsboro	287	105,202
Total Seminole	310	54,957
Total Searight	71	18,141
Total Maud	2	....
Grand total	1,081	303,822

PRINCIPAL ACTIVITIES IN KANSAS ARE CONFINED TO THREE DISTRICTS

By J. L. Dwyer
Staff Correspondent, Kansas Fields.

With the regular number of completions in Kansas, the general activity is still confined to the Lost Springs district of Marion County, the Oxford Townsite Pool, and the group of pools in Greenwood County.

The Empire Oil & Refining Co.'s second attempt to locate the southwest trend from the Keighley area of Butler is a failure. It was No. 1 Semisch, NW cor. SE NW Section 4-28-7, which found the Bartlesville sand dry from 2,660-72 feet. Lime was found from this depth to 2,732 feet, where the well will probab'y be abandoned.

At Lost Springs, the Independent Oil & Gas Co.'s No. 1 Bevans, NE cor. SE SE Section 21-17-4, an offset to production, is good for 90 bbls. daily from the regular chat 2,389-2,436 feet. A disappointment is Phillips Petroleum Co.'s No. 2 Wells Rezineck, SE cor. SW NW Section 22-17-4, which found the chat dry from 2,420-70 feet, and is drilling at 2,635 feet. The Prairie Oil & Gas Co.'s No. 1 Rezineck, NE cor. NE SE Section 22-17-4, is showing up well and may be one of the best producers in the pool. It had chat 2,404-34 feet, and filled up 1,800 feet with oil. Swabbing failed to lower the column of oil below 900 feet. It is estimated at 250 bbls.

A scattered leasing activity prevails in the Sunflower State's prospective regions. The Roxana Petroleum Corp. is reported to be taking a block of leases east of Hillsboro in Marion County after core drill work has revealed favorable conditions. The block is around Sections 12 and 13, Township 19-2, and Sections 6, 7 and 18, Township 19-3. The Empire Oil & Refining Co. has a block of acreage just west of this site. The core drill has been active in testing out the structural possibilities of this region, and it is thought that the two blocks represent highs, which are separated by a synclinal condition.

In the corners of McPherson, Harvey and Marion Counties, the Dixie Oil Co. is reported having a block of leases.

Lost Springs Production

The production by wells of the Lost Springs Pool giving the daily average output for the week ending March 10 is:

	Bbls.
Phillips Pet. Co.'s No. 1 Wells Rezineck	41
No. 1 T. Rezineck	201
No. 1 Peterson	142
No. 1 McCoy	156
No. 2 McCoy	125
No. 1 Mowrer	38
Independent's No. 1 Bevans	87
Prairie's No. 1 Mowrer	176
Sinclair's No. 1 Bevans	147
Braden and others' No. 1 Smith	52
Larlaux and others' No. 1 Peterson	88
No. 1 Merrilat	212
No. 1 Fowler	133
Harwood & Winters' No. 1 Ucker	31
Total	1,600

Churchill Pool

Production by companies of the Churchill Pool of Sumner County for the same period was:

	Bbls.
Roxana Pet. Corp.	11,220
Derby Oil Co.	611
Vickers Pet. Co.	216
Washoma Oil Co.	54
Wentz Oil Corp.	282
Selby Oil Co.	6
Total	12,391

Oxford Townsite

Output of the Oxford Townsite Pool by counties for the same period was:

	Bbls.
Roxana Pet. Corp.	7,440
La Robb and others	209
Ramsey Brothers	185
Sharp and others	12
Pickard and others	136
Stanley & Jarvis	193
Ramsey and others	6
Shawver and others	187
Wasson and others	4,886
Derby Oil Co.	579
Palmer and others	1,263
Derby Oil Co. and others	313
Mead Brothers	154
Total	15,763

Butler County

Allison & Fitzwilliams made location for No. 5 McGinnis, NE cor., Section

(Continued on Page 83)

KANSAS WILDCATS

BARBER COUNTY

Barbara Oil Co.'s No. 1 Blunk, C NE NW Sec. 20-34-13w — Drilling 1,980 ft.
O. W. Basom's No. 1 Grant, SW cor. SE SW, Sec. 18-31-3 — Drilling 789 ft.
Otstot et als' No. 1 Barlow, SE cor. SE, Sec. 22-33-3w — Shut down 1,860 ft.
Rolland and others' No. 1 Pickens, NE cor. NW NE Sec. 27-30-14w — Shut down 3,196 ft.
J. K. D. Shaffer's No. 1 Carter, C SE SE Sec. 2-32-13w — Fishing 3,980 ft.
J. K. D. Shaffer's No. 1 Boggs, SW cor. NE SW Sec. 19-33-12w — Shut down 5,035 ft.
Skelly Oil Co. and others' No. 1 Winter, CE half Sec. 17-31-12w — Fishing 3,445 ft.

HARTON COUNTY

Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w — Shut down 3,948 ft.
Huffine and others' No. 1 Smith, NE cor. SE NW Sec. 17-19-11w — Shut down 5,180 ft.

BUTLER COUNTY

Cress & Franks' No. 1 Bryson, NE cor. NE Sec. 26-27-5 — Drilling 1,247 ft.
Empire Gas & Fuel Co.'s No. 1 Semisch, NW cor. SE NW Sec. 4-28-7 — Drilling 2,310 ft.
La Robb and others' No. 1 Bronsenger, NE cor. SW Sec. 24-27-3 — Rig.
Joe Liggett's No. 1 Travender, NW cor. SE Sec. 24-28-6 — Drilling 2,530 ft.
White Eagle Oil & Refining Co.'s No. 1 Dixon, NE cor. SE SW Sec. 1-27-6 — Hole full of water 3,099-3,105 ft.; shut down.
H. F. Wilcox Oil & Gas Co.'s No. 1 Littell, NE cor. SE NW Sec. 21-29-4 — Collapsed casing 1,458 ft.; shut down.

CHASE COUNTY

Griener & Fowler's No. 1 Carson, NE cor. NE Sec. 9-21-7 — Drilling 2,120 ft.

CLARK COUNTY

Skelly Oil Co. & Merriam's No. 1 Winter, C E Half Sec. 17-31-12w — Drilling 3,512 ft.
Walter & Warner's No. 1 Mitchell, SW cor. NE Sec. 16-31-23w — Shut down 600 ft.

CLOUD COUNTY

Concordia Producing & Refining Co.'s No. 1 Murdock, SE cor. SE Sec. 6-6-4w — Shut down 3,590 ft.

COWLEY COUNTY

Allison & Fitzwilliams' No. 1 Shapland, NE cor. NW SE Sec. 20-30-6 — Shut down 790 ft.
Barnsdall Oil Co. No. 1 Russell, NE cor NW SE Sec 15-33-4 — Rig.
Derby Oil Co.'s No. 1 Seaman, NE cor. SE NE Sec. 32-30-3 — Drilling 2,802 ft.
John Herron and others' No. 1 Marshall, SW cor. NE Sec. 36-30-6 — Drilling 1,560 ft.
R. H. Hood's No. 1 Butler, C SE SE Sec. 15-26-11 — Drilling 700 ft.
Meridian Gas Co.'s No. 1 Roselle, SW cor. SE Sec. 8-35-1 — Drilling 2,010 ft.
Otstot et al's No. 1 Volker, NW cor. NE, Sec. 9-35-1 — Rig.
Harris & Hahn's No. 1 Gamble, C NW NW Sec. 17-31-3 — Shut down 1,400 ft.

(Continued on Page 124)

Grant County

Argo Oil Co.'s No. 2 Howell, SE cor. SW SW, Section 14-27-3w, Deer Creek Field, has been completed for 24,000,000 feet of gas in sand at 4,186-4,200 feet. Blackwell Oil & Gas Co's No. 3 Crouch, CEL W half NW, Section 23-27-3w, is dry and abandoned at 4,468 feet.

Kay County

Wilson Gas Co. is moving in a spudder to drill No. 1 Vaughn, CEL W half SW SE, Section 20-29-1, for shallow gas. Rogers and others' No. 1 Glenny, C NW SW, Section 33-27-1w, is rigging up machine to drill for shallow gas.

Harris & Haun's No. 1 Austin, C SE NE, Section 17-29-1w, is dry and abandoned at 2,122 feet. No. 1 Tickel, NE cor. SE NE, Section 25-29-1w, has been abandoned at 2,163 feet. No. 2 Tickle, NE cor. SE, Section 25-29-1w, has also been abandoned at 982 feet. Marland Oil Co.'s No. 3-A Dickerson, C W half NW SE, Section 17-29-1, has been shut in for 3,700,000 feet of gas in sand at 1,470-88 feet. Ingram & Wilson's No. 1 Johnson, SW cor NE, Section 36-28-1w, is good for 1,000,000 feet of gas in sand at 665-67 feet. Nehr & Wilson's No. 1 Bersche, SW cor. SE, Section 4-27-1, has been completed for 1,400,000 feet of gas in sand at 747-67 feet.

Creek County

Independent Oil & Gas Co. is preparing to deepen No. 4 Beaver, NW cor. SW, Section 15-14-8. Sunray Oil Corp. and others made location for No. 1 Probst, NE cor. SW SE, Section 11-14-9.

Kennedy & Horner and others' No. 3 Burnett, NW cor. SW SW, Section 24-18-11, has been completed for 12 bbls. in Taneha sand at 1,773-86 feet. Devonian Oil Co.'s No. 2 Hawkins, SW cor. NE, Section 4-18-12, drilled Turkey Mountain sand at 2,302-22 feet and plugged back to Hominy sand at 2,185-2,204 feet where it made 35 bbls. Westland Oil Co.'s No. 1 Unallotted, NE cor. SE, Section 24-17-9, was completed for 150 bbls. in Red Fork sand at 2,136-71 feet. Tidal Oil Co.'s No. 6 Dickson, SW cor. NW, Section 19-17-10, made 25 bbls. from Red Fork sand at 2,155-79 feet.

Jackson & Wise's No. 4 Hendrickson, NE cor. SW NE NW, Section 21-16-9, made a 45-bbl. well in the Dutcher sand at 3,000-3,008 feet. Madden & Madden and others' No. 1 Sellers, NE cor. SE SW, Section 13-15-9, flowed 160 bbls.

(Continued on Page 80)

Set Your Casing to STAY!

with OILMAX CEMENT

CEMENT your casing with Oilmax Cement and *know* it's there to stay—rigidly anchored by the tremendous strength so rapidly developed by this quick-hardening cement. The danger of broken casings, gas blow-outs, shooting off of shoes and seats is eliminated. All strain from underground pressure is relieved. Corrosion and costly leaks are no more.

Prepared solely for cementing oil wells, Oilmax Cement is used neat *only*. No accelerators nor admixtures necessary. It fully meets all Govt. and A. S. T. M. specifications for Portland Cement. And in addition, it develops *more* strength in 24 hours than ordinary Portland Cement produces in ten days—with increased strength thereafter. That's why you can set your casing today and resume drilling in 48 hours. No costly six to ten-day delays. No holding up of high-priced labor.

Oilmax is *not* quick-setting, but takes its initial and final set *normally* — just like Portland Cement — permitting ample time for proper placing. It is especially compounded to set up successfully in salt water or water containing sodium chloride, magnesium chloride or calcium sulphate.

Be sure of a safely-anchored casing from the very start. Speed up your drilling operations. Cut your costs by saving time, labor and wages. Use Oilmax Cement next time!

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RESUME DRILLING IN 48 HOURS

Bigger Production in Refugio Field

Houston Oil Co. Well Deepened Estimated Good for 80,-000,000 Feet of Gas. Another Test of Driscoll Pool Well

By B. D. Stevenson
Staff Correspondent, Southwest Texas

SAN ANTONIO, Tex., Mar. 12.—Houston Oil Co., after taking 2,500,000,-000 feet of gas from No. 1 Rooke in the Refugio Field in Refugio County from a sand at 2,400 feet, deepened the well to 3,226 feet and has bigger production than when it first came in and with a rock pressure of 1,320 pounds.

In the 2,400-foot sand it was estimated good for 80,000,000 feet of gas daily on an open flow. A feature of the well is that it is getting the sand 74 feet higher than the Houston Gulf Gas Co.'s well on the Shelly lease which was the discovery well in this new deeper sand. Thus far this new sand with but a few wells completed is making as good or better showing than anything in the natural gas line in all Southwest Texas. The gas is free from water and the production prolific and added to this new sand in the Refugio Field on the west side of the town of Refugio the Houston Gulf Gas Co. recently completed a well on the O'Connor lease a few miles east of the town of Refugio. Other than this well the Houston Oil Co. has been shutting down on operations all through Southwest Texas, including the Mirando Field where last week it brought in No. 4-B Benavides in the Cole Field with 460 pounds rock pressure and about 40,-000,000 feet open flow. It abandoned the deep test in the White Point Field and is not starting anything new there at this time.

Magnolia Petroleum Co. is down 2,200 feet in the Schott Pool at Mirando City which is part of the Mirando Field. The regular production there is at about 1,650 feet and the high gravity oil at about 1,950 feet. Cole Petroleum Co.'s No. 53 Benavides in Survey 412 of Webb County, 4 miles west of the Cole gas field, is a 10,000,000-foot gas well spraying oil like Nos. 51 and 52 when they first came in. No. 53 is a northwest offset to No. 51 which is now making 160 or more barrels daily. Cole Petroleum Co. is starting two new wells in the same field, one a north offset to No. 51 and the other a few locations south and east of No. 51.

Driscoll Pool

In the new Driscoll Pool in Duval County, Driscoll is preparing to make another test of his No. 9 which came in on a 30 minutes' open flow through the drill stem and made gas which was turning to oil when at the end of the 30 minutes it started making salt water and was shut in. It was first thought the salt water was coming from sands above the bottom sand and sands which were not cased off but there is a suspicion in the minds of some that the salt water came from the bottom of the hole. Driscoll is down 300 feet on his No. 11 which is west of the discovery gas well of that field. Edwards St. Albans is moving in for his No. 1 Hyatt in Survey 25 which is a mile north of the Driscoll wells. He is the first outside of Driscoll to enter the field. National Oil Co., a few miles to the east of the Driscoll wells and on the Ball ranch, is down 2,000 feet and by the close of this week or early next week, barring accidents, should be getting to around 2,469 feet where the Driscoll No. 8 fee, the discovery gas well, came in. National is far enough away to be on a different structure but may pick up the same sand.

Three new locations were made the past week in the coast territory by the Houston Gulf Gas Co., one in the Refugio Field, one in the White Point Field and one a wildcat, No 2 Waelder in San Patricio County.

Dale Field

The Texas Company is starting a new well in the Dale Field in Caldwell County, No. 8 Clingensmith. An interesting feature of the new Dale Field was the shooting of the Sun Oil Co.'s No. 2 Tally which came in a small well but was shot with dynamite when The Texas Company got a pretty good well offsetting it. The Sun company's well at last accounts was flowing around 400 bbls., one day exceeding that amount and another day's gauge being slightly below that. This production is from Serpentine which is porous in spots and tight in other spots. Success in the Sun well may lead to the shooting of other wells in the field that have started off as small producers.

In the Kohler Field in Duval County, several miles north of the Cole gas field, where Humble Oil & Refining Co. completed Nos. 4 and 6 Kohler as small oil wells at around 2,700 feet, No. 7 is on the sand but is not yet a well. It tested salt water with some oil on the first test but the company is reworking the well and hopes to make as good a producer out of it as the other wells which are making 30 bbls. or so each.

Kingsville Field

In the Kingsville Field, Humble Oil & Refining Co. has No 5 Kleberg with casing set at about 2,830 feet and is waiting on the cement to set. Extra time is given the cement in that field because it is difficult to get it to set. The well is a northeast offset to No. 2 Flato that pumped 15 bbls. daily for two years and then turned gusher, with total depth of 2,928 feet. There is uncertainty as to where the extra production in No. 2 Flato came from, hence the testing of this sand at 2,850 feet in No. 5 Kleberg is a matter of moment in the field. No. 6 Kleberg is waiting for cement to set around 2,240 feet in a sand that is producing in several other wells.

Humble Pipe Line

Humble Pipe Line Co.'s case with the State is in the Supreme Court but the company has resumed activity at Ingleside though it has changed its plans, at least temporarily. The State, it will be remembered, secured an injunction in the District Court stopping Humble Pipe Line Co. from laying its line 2 miles into the Gulf in order to load deep-water vessels to capacity. The Civil Court of Appeals dissolved the injunction and the State went to the Supreme Court on an application for writ of error. The Supreme Court sometimes takes cases just on the importance of the case and so heard this case regardless of whether there was error or not. However, it may be some time before a decision is reached, though the court advanced the case.

Humble Pipe Line Co., however, has put its men back to work and is laying the extension not to Mustang Island and then into the Gulf, but is laying the extension to Harbor Island where Humble has property with storage tanks and docks. Harbor Island is at the mouth of Arkansas Pass and the understanding is that Humble is to advance to the Government the money to deepen the channel so as to accommodate deep vessels, to be reimbursed when Congress makes the appropriation for the work. The length of this channel to be deepened is not great and should be accomplished in a short time. In the meantime Humble Pipe Line Co. is to start erecting two additional 80,000-bbl. storage tanks on Harbor Island at once and the work is progressing also on its refinery back on the main line. Two new 55,000-bbl. tanks are also starting up at Ingleside on the mainland for the refinery. Also the looping of the pipe line from McCamey to Ingleside is nearly completed and when completed will raise the capacity of the line to about 70,000 bbls. daily. Oil has started through the Illinois Pipe Line Co. line from the Mid-Kansas Oil & Gas Co. tank farm at Del Rio to Lytle where Humble Pipe Line Co. has built several tanks to receive the oil and will move it from that point to Ingleside through its line.

COMPLETIONS

Gonzales County

Green & Shall's No. 2 Dubose, J. Pratt Survey, 350 varas to center of south line, has been abandoned dry at 2,735 feet.

Gonza Petroleum Co.'s No. 1 Elder has been abandoned at 2,240 feet.

Jim Hogg County

Johnson and others' No. 24 Palacious, Survey 291, Block 14, in the Randado Field, location only, has been abandoned.

Edward St. Albans' No. 9 Lopez, Share 1, Block 6, Henne, Winch & Fariss Field, has been temporarily abandoned at 2,144 feet.

San Patricio County

Houston Oil Co.'s No. 2 Ragsdale, J. N. Seguin Survey, deep test in the White Point Field, has been abandoned at 4,700 feet.

Refugio County

Houston Oil Co.'s No. 1 Rooke, one of the largest wells in the Refugio gas field, at 2,393 feet deepened to the 3,300-foot sand, getting it at 3,226 feet, some 74 feet higher, and has been completed and turned into the gas lines with a rock pressure of 1,320 pounds.

Webb County

Houston Oil Co.'s (Sun) No. 4-B Benavides, Survey 12, Block 13, Cole gas field, in Webb County, at 1,699 feet has been completed gauging 40,000,000 feet with 460 pounds rock pressure.

Cole Petroleum Co.'s No. 53 Benavides, Survey 412, Block 5, in the new field recently opened, and in which there are two oil wells at 2,334 feet, is a gasser of 10,000,000 feet and spraying oil.

Livingston and others' No. 1 Puig, Block 5, Aviator Field, has been abandoned at 1,810 feet dry.

Houston Oil Co.'s No. 3 S. Benavides, Survey 683, Carolina-Texas Field, rigged up to deepen at 3,014 feet, has been abandoned, not deepened.

Houston Oil Co.'s No. 2 Juan V. Cuellar, Share 1, Cuellar grant, north of Bruni, at 2,371 feet, total depth; sand at 2,366-71 feet tested 1,000 feet of salt water in 20 minutes and has been abandoned.

Zavala County

Witherspoon Oil Co.'s No. 1 West, West gas field, Survey 43, J. Fuentes Survey, 400 feet to north line and 4,000 feet to west line, at 833-40 feet, is a

(Continued on Page 136)

WILDCAT TEST EAST OF CUERO ON GULF SIDE OF ESCARPMENT

By B. D. Stevenson

SAN ANTONIO, Tex., Mar. 12.—L. H. Baker and associates have leased a block of several thousand acres in the eastern extremity of DeWitt County, 12 miles east of Cuero and due south from Terryville, and will drill a wildcat test. The interesting features of the test are that it is on the Gulf side of the Reynosa escarpment. The Mirando production in Webb and Zapata Counties is similarly situated with reference to the escarpment and the Humble Oil & Refining Co.'s new pool at Raccoon Bend in Austin County is also so situated. Mirando Field is 230 miles to the southwest measuring in a straight line and the Raccoon Bend Field is 100 miles northeast with some gas production in Live Oak County between the Baker well and the Mirando production and more or less evidence in the way of oil and gas showings elsewhere along the Reynosa escarpment.

For many miles on either side of the Baker well there has been almost no wildcatting. On the Baker lease is a well drilled for water to 1,442 feet 17 years ago that has been flowing a 2-inch stream of water and enough gas to burn in a steady flame ever since it was completed. The Humble Oil & Refining Co.'s No. 2 Gotosky in Austin County at 3,289 feet with 1,500 feet of drill stem lost in the hole was flowing 260 bbls. of oil. Every well drilled along the Reynosa escarpment is a matter of interest since every such well located on geology has a chance of bringing duplicates of the production at one end or the other of the line. Prospect of the Baker test is one of the few ripples on the surface of an otherwise very quiet week in wildcat circles.

Live Oak Test

In Live Oak County J. A. Harper is expecting to test early this week his No. 2 Nichols north of the Frio River and just east of the McMullen-Live Oak County line. It is 1½ miles east of the Calliham or Grubstake Field. Harper passed up a gas sand at 1,142 feet when he drilled the No. 1 Nichols and finding no production down to 1,800 feet drilled No. 2 to develop the gas sand. No. 2 failed to find the gas sand at 1,168 feet and he was about to abondon the hole and had hauled out cement to plug it. A drill stem tester was run in the hole and left open 15 minutes and came out with eight trebles filled with fluid mostly oil. Casing was set and the well is about ready to bail in.

In Medina County Pat Armstrong has a showing of oil and gas in his No. 1 Mangold north of the east end of the Adams gas field. The showing is at around 800 feet which is nearly 200 feet higher than in the Adams Field. The well shut down until Armstrong could return from West Texas.

Duval County

National Oil Co.'s No. 1 Ball, Survey 16, located 450 feet to north line and 150 feet to east line, is drilling at 1,550 feet. Houston Oil Co.'s No. 1 Woods-Welder, Survey 233, located 1,750 feet to west line and 100 feet to north line, is drilling at 1,800 feet.

Hidalgo County

D. L. Smith Oil Co.'s No. 5 Fernandez, Porcion 46, Block 34, located 125 feet to north line and 225 feet to west line, is down 3,240 feet.

Jim Hogg County

M. I. Shaw and others' No. 1 Jones, Survey 381, Block 12, located 171 feet to south line and 486 feet to west line, at 1,700 feet had gas showing, cored at 1,708 feet shale streaked with sand, had rock at 1,700-02 feet and is now drilling at 1,714 feet. Holden and others' No. 1 Jones, Share 27, Block 136, is standing at 2,548 feet.

Starr County

The Texas Company's No. 1 M. Guerra, Porcion 68, Block 91, located 100 feet to east line and 150 feet to south line, was

(Continued on Page 135)

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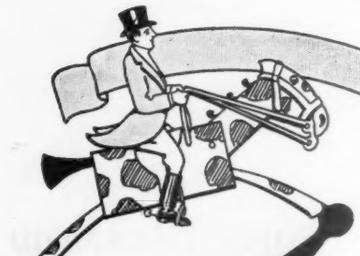

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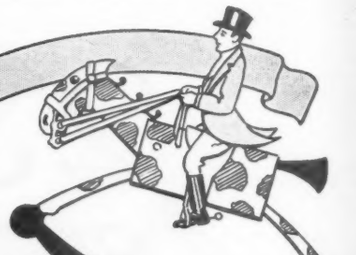

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Increasing Activity at South Liberty

Seven New Tests Started and Locations Being Made for a Dozen More, Depending on Tests Now in Progress

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Mar. 12.—The past week witnessed increasing activity at South Liberty, Liberty County, the busiest spot at present in the entire Gulf Coast district. Late Saturday, seven new tests were under way and locations had been staked for a dozen others, although most of the latter will not be drilled pending completion of tests already under way.

The drilling is in two clusters, one around Yount Lee Oil Co. and Sun Oil Co.'s new wells, 200 feet north of the main South Liberty Field, and the other around The Texas Company's No. 1 Green, more than a mile north of production. A strip of territory along the edge of the dome extending between the two clusters is expected to be drilled in the present boom, and if productive will make the South Liberty Field one of the longest in the entire coastal territory.

The principal interest is centered around the most northerly cluster, where The Texas Company's No. 1 Green came in two weeks ago flowing at the rate of 2,250 bbls. of oil daily from 2,288 feet. This company started drilling Saturday in its No. 3 Green, a location south of No. 1, and was rigging up its No. 2 Green to the west.

Offsetting No. 3 Green, Sun Oil Co.'s No. 1 Abshier, which is just over the lease line to the south, was preparing to run surface casing around 300 feet, while to the west and offsetting The Texas Company's No. 2 Green, Abercrombie & Harrison's No. 1 Lacour had finished rigging up and had spudded in.

Rains Slow Work

Steady rains all week slowed up work in this district, but hauling of derrick materials and other equipment was kept up as fast as possible. This mile-north extension is on the banks of the Trinity River and in a swampy bottom, where the deep mud prevents anything but wagons with long teams of mules from reaching.

In that district, Abercrombie & Harrison have locations for No. 2 Lacour, 50 feet from the north line, and 50 feet from the west line of the lease; No. 3 Lacour, 50 feet from the north line of the lease and midway between Nos. 1 and 2 and No. 4 Lacour, 50 feet from the east line and 75 feet south of No. 1. All are in the M. G. White Survey. No. 1 is 50 feet from the north line and 50 feet from the west line.

In addition to Nos. 1, 2 and 3, The Texas Company has staked tentative locations for 8 other tests, 7 on the Green lease and one on the Pickett tract. Sun Oil Co. to the south has tentative locations for No. 2 Abshier (Bashara), 50 feet from the north line and 75 feet from the east line of Lot 5 (4.07 acres), and No. 1 Singleton, 50 feet from the north line and 75 feet from the west line of the lease, Lot 6.

Discovery Stops Flowing

In the midst of this drilling activity, The Texas Company's No. 1 Green, the discovery well of this extension, suddenly stopped flowing Thursday morning. It had been holding up from 1,500 to 1,800 bbls. steadily since its initial flow two weeks ago, flowing through a choke. Thursday the well was opened up through a 4-inch line and then stopped flowing.

While it has not been determined what the cause was for this stopping of the flow, operators have expressed very little concern. It is possible that opening of the well caused too great a drain on it causing it to sand up prematurely. Saturday it was being worked on. Drill stem still is in the hole.

In the 200-foot extension district, Sun Oil Co. was completing the derrick for its No. 2 Mitchell, 50 feet north of No. 1. The Texas Company was starting drilling in its offset to Yount Lee Oil Co.'s lease to the south. Yount Lee Oil Co. also is starting drilling in its No. 3 Mitchell, 150 feet east from No. 1 and 50 feet from the south line of the lease.

Rains have not interfered with operations in this district, as it is on the main road from the town of Liberty to the main South Liberty Field. No road had been built to The Texas Company's No. 1 Green, however, and hauling there has been through new country, only a clearing having been cut through the woods. The most northerly extension is visible from the paved highway between Liberty and Houston, but is inaccessible except down through the old field, which is a mile and a half south of Liberty.

Sorrento Dome

The revived oil boom at Liberty, where one of Gulf Coast's biggest fields appears to be in the making, has overshadowed to a great extent most other coastal operations, but of importance during the week was the McElroy Field on Sorrento Dome, Ascension Parish, Louisiana, where Gulf Refining Co.'s No. 5 United Land Co. bailed salt water.

This test is 600 feet due west of No. 4 United Land Co., the discovery well, which has been flowing steadily from 1,200 to 1,500 bbls. of pipe-line oil daily. No. 5, however, ran around 50 feet lower on the cap rock than did No. 4, the total depth of No. 5 being around 1,700 feet.

A location for No. 6 United Land Co. was to have been made 800 feet further west to make a test on the flank of the dome off the cap rock, but this is being held up pending a decision to deepen No. 5. To make a location for No. 6, a clearing will have to be cut through the swamps and a plank roadway laid, No. 5 being at the end of the present plank road.

East Hackberry Setback

East Hackberry (Cameron Parish) operations also received a setback earlier in the week when Calcasieu Oil Co.'s No. 2 Watkins encountered salt at 3,875 feet. This was the first test to find the dome at East Hackberry. It was a location west of No. 1 Watkins, which came in flowing 2,500 bbls. daily. No. 3 Watkins, still further west, has been abandoned as a location.

The Watkins tract is on the north of Kelso Bayou; and as a result of No. 2 Watkins finding salt, Calcasieu Oil Co. is moved back on the south side of the bayou and has started No. 3 Caldwell, adjoining No. 2 Caldwell, the discovery well. No. 1 Dorion, also on the south side of the bayou, is drilling at 4,200 feet.

Yount Lee Oil Co.'s No. 6 State in Kelso Bayou was to have been tested as the week closed, it having the sand encountered by the other East Hackberry tests.

C. O. Noble and associates' No. 1 Ellender, a mile and a half southwest of the East Hackberry operations and on the Old Hackberry Dome, also was to have been tested as the week closed. It has 6⅝-inch casing set at 4,230 feet. The plug had been drilled and screen was being set late Friday.

Sweet Lake

At Sweet Lake, also in Cameron Parish, Pure Oil Co. still was trying to workover No. 3 Sweet Lake, the discovery well, in an effort to bring it back. This well has sanded up and been brought back at least three times. No. 2 also was drilling deeper.

At White Castle, Iberville Parish, Roxana Petroleum Corp.'s No. 1 Wilbert, is drilling hard, sandy lime at 2,130 feet. On Bayou Des Glais Dome, also in Iberville Parish, has been abandoned temporarily at 2,998 feet. Union Sulphur Co.'s other test in this parish, on Bayou Blue Dome, was abandoned temporarily several weeks ago.

Gulf Refining Co. abandoned a test at Lutcher (Thibodeau), its No. 2 Stark, which drilled into gyp at 1,373 feet.

Roxana Petroleum Corp. is rigging up for its No. 1 Watkins, a wildcat at Black Bayou, a prospect of this company in Cameron Parish, west of the Hackberry operations.

Gain at Blue Ridge

Despite a substantial increase at Blue Ridge, Fort Bend County, where a number of new wells were brought in during the week, Gulf Coast daily average production showed a decrease of 3,198 bbls. during the week ending March 10, making a total daily average for the week of 116,337 bbls. The daily average by fields was:

Gulf Coast

Spindletop	30,728
Saratoga	1,001
Batson	1,450
Goose Creek	7,181
Sour Lake	3,504
Hull	11,737
Big Creek	2,092
Columbia	8,193
Humble	3,989
Pierce Junction	7,471
Blue Ridge	6,572
Markham	200
Orange	4,481
Damon Mound	855
Dayton	279
South Liberty	3,921
High Island	307
Moores Field	130
Boling	2,828
Nash Dome	2,800
Barbers Hill	650
Vinton	4,783
Starks	216
Edgerly	1,244
Evangeline	965
Lockport	4,409
Sweet Lake	1,536
Sulphur	160
Hackberry	1,355
Sorrento	1,200
Miscellaneous	100
Total	116,337
Total last week	119,535
Decrease	3,198

Daily average production of Southwest Texas and East Central Texas fields continued fairly steady as follows:

Southwest Texas

Somerset	2,130
Lytton Springs	1,485
Dale	791
Luling	14,195
Miscellaneous	8,678
Total this week	27,279
Total last week	27,131
Increase	148

East Central Texas

Mexia	7,621
Cedar Creek	940
Nigger Creek	830
Currie	518
Wortham	2,005
Richland	553
Powell	12,136
Total this week	24,603
Total last week	24,798
Decrease	195

Miscellaneous Texas Wildcats

Humble Oil & Refining Co.'s No. 1 Wilson at Raccoon Bend, Austin County, is drilling shale at 2,979 feet. Its No. 1-A Grawunder is in hard lime and shale at 976 feet.

Humble Oil & Refining Co.'s No. 1 Sugarland at DeWalt, Fort Bend County, is drilling shale at 3,422 feet.

Humble is rigging up for No. 2 Texas-Warren at Hockley, Harris County. Its No. 2 Warren at Hockley is drilling at 4,425 feet.

At Lost Lake, Chambers County, Pure Oil Co. is coring at 3,590 feet in No. 1 Lost River. It drilled out the 8¼-inch plug cemented at 3,567 feet.

As the week closed, Roxana Petroleum Corp. was bailing in No. 4 Allen on Allen Dome, Brazoria County, but the test was bailing only heavy mud with no production. This is down 4,915 feet. No. 1 Random is coring at 4,814 feet.

Rucks and associates bailed salt water in their No. 2 Muldoon at "Slop Bowl," Brazoria County, in testing sand at 1,025 feet. Stanfield & Meyers' No. 1 McNeill,

(Continued on Page 136)

TAMASOPA WELL IN TOPILA POOL IS ESTIMATED AT 2,000 BARRELS

By George Blardone
Staff Correspondent, Mexican Fields

TAMPICO, Mexico, Mar. 9.—The well of the week in Mexican fields was drilled in in the Paciencia de Auguacate sector of the Topila Pool. It is Cia. Pet. Financiera's No. 5, Lot 14, and was finished at the shallow depth (for that sector) of 2,207 feet, and it is conservatively estimated at 2,000 bbls. or more. It is reported a Tamasopa well. D. A. Williamson, the well-known young contractor, who first made history in this sector when, in 1922, he finished the biggest producer the sector has recorded, although it was never a sensational well, drilled No. 14.

Only two other producers can be recorded, both in the south fields, Penn Mex Fuel Co. in its No. 19 Jardin has a 400-bbl. well at 2,289 feet. Mexican Eagle Oil Co.'s No. 6 San Marcos is a dry hole at 1,750 feet. Peiper and others' No. 3 Chiconcillo is rated 150 bbls. at 2,440 feet.

There were four failures in the northern fields: Mexican Sinclair Petroleum Corp.'s Nos. 235 and 236, Lot 2 Cacalilao, are both dry holes at 2,163 and 1,885 feet, respectively. Transcontinental Petroleum Co.'s No. 299, Lot 4 Cacalilao finished in salt water at 2,125 feet. La Corona Petroleum Co. junked No. 3 Chila at 1,465 feet, and is skidding over to No. 3-A.

In sum, 8 completions, 3 producers, 5 failures and new production of say 2,550 bbls. There are 8 tests drilling in the south fields, or preparing to drill, and 22 in the northern fields.

Apropos of Mexican Eagle Oil Co.'s No. 4 Mecapepec, the wildcat that made its rather sensation debut for these dull days, it has been unofficially stated that the well is doing 1,000 bbls. with 550 pounds pressure at the well head, shoving the production 12 kilometers through a 2-inch line. The gravity is said to be 26 degrees Baume. It will be recalled that Mecapepec lies say 12 kilometers north of the Furbero Pool, which is also owned by this company.

Daily average production at this time is approximately as follows: North fields, 77,000 bbls.; south fields, 68,000 bbls. The vessel shipments hold around the 3,500,000 bbls. the month rate.

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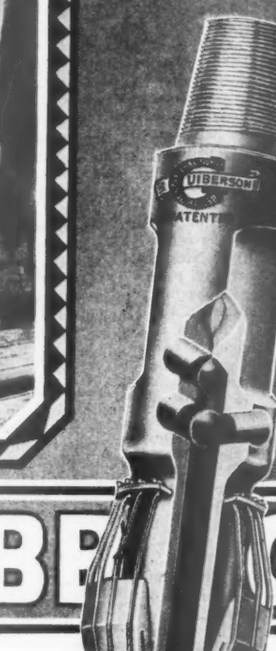

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The photograph shows H. H. Sutton, driller (center), and M. D. Coffman, tooldresser (left), employed by a large operator in the Bowlegs field. Mr. Sutton says he likes the GUIBERSON because it is *"fast and gets more fluid."* Fully patented.

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GUIBERSON
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New Work in Richland and Monroe

Gas Line to St. Louis Now Regarded as Certainty. Central Louisiana and New Orleans Projects Reported

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas.

SHREVEPORT, La., Mar. 12.—Advancing spring weather and progress on pipe line projects from the Monroe and Richland Parish Fields are expected to still further advance the increase in drilling activities in this territory noted in the number of new operations begun during the past month or so, particularly during the past two weeks. This activity at present is not centered in any one locality of the division but is widely scattered in both proven and wildcat territory.

As to the pipe line projects, it is understood that difficulties that have held up announcement concerning the Richland-Monroe-St. Louis project have been or are being largely overcome and that the line is a certainty with Moody-Seagraves, Palmer Corp. and Interstate Gas Co. as the owners. It will be a 22 or 24-inch line handling 100,000,000 to 125,000,000 feet per day to industrial consumers.

Belchic & Laskey, it is reported, have financed their project through central Louisiana and along the Gulf Coast and will start construction soon, and it also is rumored that this project is but part of a still larger undertaking concerning which an announcement is expected later.

A third project reported arranged for is extension of Interstate Pipe Line Co.'s 22-inch line from Destrahan to New Orleans to serve the manufactured gas plant now in operation by increasing its capacity to meet growing demands, thus answering the city's cry for more fuel.

All this will require considerable development in Richland, where 27 of 33 producers with a total open flow of 1,153,000 feet per day are capped awaiting an outlet as well as the Monroe Field. In the latter there are 426 wells being pulled with a total open flow of 3,470,698,000 feet, production going to carbon black manufacture, Monroe, and to six pipe lines. As of March 1 there are 15 wells actually drilling in Richland with 6 rigs and in the Monroe district 16 drilling, with 10 rigs.

Completions During Week

There were 23 completions in the division during the week, 18 of them in proven areas. Three producers added 400 bbls. initial, 11 were gassers with 158,240,000 feet initial open flow and 9 were failures.

The most interesting of the completions, as it happens, is one of the failures, Humble Oil & Refining Co. having abandoned No. 30 Bliss & Wetherbee in Section 15-19-11, the center of the Bellevue shallow field, at a total depth of 5,302 feet with the bottom 12 feet in a hard gray sand. It was begun a year ago and, while a failure from a production standpoint, has furnished a wealth of information concerning underlying formations which, had it been drilled elsewhere, could not have been penetrated except at much greater depths. Located on top of the Bellevue Dome it is geologically speaking by far the deepest hole ever drilled anywhere in the Tri-state area and is estimated to be probably 1,200 feet deeper in that respect, than Dixie Oil Co.'s No. 1 Jenkins in Section 9-12-11, DeSoto Parish, which is drilling at 6,150 feet.

Clifton Davis' No. 5 Simpson, Section 14-16-16, Sligo district of Bossier Parish, was another abandoned test, junked at 2,312 feet.

Two producers and one failure in the Cartersville district and a semiwildcat in the same area summed up Bossier's contributions to the completions list. Northwest Louisiana Gas Co. made a second completion of No. 3 Bollinger in Section 38-23-11, southeast of Cartersville production, with 40,000,000 feet of gas, 6 feet of sand, total depth 3,066 feet. On first completion, February 9, 1927, it made 15,000,000 feet, total depth 2,677 feet. Sales & Walker's No. 1 Kilgore in Section 31-23-12, gauged 3,500,000 feet in 7 feet of sand, total depth 3,063 feet, and was quite an extension south and east. The Texas Company's No. 2 Wilkinson in Section 36-23-12 fell far short of No. 1 in the same section, making only 3,000,000 feet of gas in 3 feet of sand, total depth 3,093 feet, whereas No. 1 gauged 23,000,000 feet with 3 feet of sand, total depth 3,073 feet. Rock pressure on No. 2 was 1,210 pounds and on No. 1, 1,270 pounds. Woodley & Collins' No. 3 L. & A., Section 15-23-12, on the east side of production, was abandoned on account of salt water at 3,250 feet, having been shut down since January 18.

Caddo Failure

Caddo had one completion, a failure, The Texas Company abandoning No. 19 D. H. Raines, Section 15-21-15, as a junked hole at 4,457 feet, having been unable to salvage drill stem lost at that depth after a salt water test in January. Pittsburgh Oil & Development Co. tested salt water in 7 feet of sand at 4,010-17 feet and was trying to loosen a stuck drill stem when the derrick pulled in, killing W. E. Pratt, driller, and injuring Jodie Jones, another member of the crew.

Wingfield and others abandoned No. 3 Gibson, Section 2-9-1e, LaSalle Parish, as a salt water hole in the Urania Field, total depth 1,496 feet.

Two gassers were completed in the Ouachita Parish part of the Monroe district, Palmer Corp.'s No. 2 Central Real Estate, Section 1-19-4, with 5,000,000 feet, total depth 2,127 feet, and Peerless Carbon Co.'s No. 3 Moore, Section 49-20-4, with 8,000,000 feet, total depth 2,175 feet.

Only one of the completions was in Richland proven territory, Southern Carbon Co. getting 53,740,000 feet of gas in No. 2 Sartor, Section 20-16-6, total depth 2,440 feet.

Ruffin and others completed No. 1 McElroy, Section 33-10-12, Pleasant Hill Pool of Sabine Parish, flowing 110 bbls. initially from 7 feet of sand, total depth 3,255 feet.

Magnolia Petroleum Co.'s No. 1 J. L. Munn, Section 36-23-10, Sarepta district of Webster Parish, was a 4,000,000-foot gasser, total depth 2,704 feet. Woodley & Collins listed No. 1-B Cox, Section 23-21-10, Cotton Valley, as a 3,000,000-foot gasser at 4,512 feet, total depth 4,737 feet. This is the deepest production, either oil or gas, yet found in this division. Completed the first time October 15, the well made 4,000,000 feet of gas at 4,438 feet. Drilled to 4,737 feet it was bailed in making 3,000,000 feet of gas, lots of salt water and some 50 gravity oil and after setting 4½-inch casing to cut off the water, was bailed again, making the same amount of gas, 200 bbls. of water and the same amount of oil. Then it was cemented back to 4,512 feet and completed as stated.

Smackover proven area came back on the scene with a 30-bbl. pumper in Little Fay Oil Co.'s No. 4 Robertson, Section 25-15-16, total depth 2,051 feet. It made location for No. 5 in the same section.

East Texas

In East Texas, Fuller & Fuller abandoned No. 3 Furrh in the J. Short Survey, Harrison County, as a dry hole in the shallow 900-foot horizon. Panola County had two small gassers, Natural Gas Products Co.'s No. 2 Adams, Evans Brackins Survey, 3,000,000 feet, total depth 991 feet, and D. Thomason's No. 3 Crenshaw, John Womack Survey, 3,000,000 feet, total depth, 2,300 feet.

Results in the Champagnolle district of Union County, Arkansas, were somewhat doubtful. Pure Oil Co. had a blowout of about 3,000,000 feet of gas in broken sand from 2,935-72 feet in No. 1 Gregory, Section 10-17-14, and is trying to kill it to go deeper. Simmerall and others, drilling No. 1 Finley in Section 12-17-14, south and east of production, got salt water at 3,079 feet but have resumed work, coring and drilling, and on last report were in hard rock at 3,082 feet. Production north is from around 3,036 feet and west at around 2,762 feet. The well is reported scheduled for 4,500 feet before being abandoned unless production is found higher up. To make the situation more cheerful, Ohio Oil Co.'s No. 7 Crain in Section 1-17-14, completed a couple of months ago as a flowing well with considerable water, started flowing by heads suddenly while pumping and was reported making 1,000 to 1,500 bbls. fluid, 200 bbls. oil.

Daily Average Runs

Daily average runs from the field declined 810 bbls. over the week, total production being 131,215 bbls. daily, compared to 132,025 bbls. the week before. Louisiana runs were 44,885 bbls., compared to 45,300 bbls., and Arkansas' were 86,330 bbls., compared to 86,725 bbls. Six of the 17 producing districts showed increased runs. Bellevue, which has been running 800 to 900 bbls. daily for the past five weeks, took a sudden turn upward, shipping 1,100 bbls. daily. Urania also went up instead of down, running 205 bbls. more than last week. Ruffin and others' 110-bbl. well in Pleasant Hill raised that pool's average 180 bbls. to a daily run of 850 bbls. There was a 45-bbl. increase in movement of Smackover light oil to 8,535 bbls. per day and a 40-bbl. gain in Nevada County shipments which averaged 1,750 bbls. Lisbon was practically stationary with a 5-bbl. increase to 2,320 bbls. Cotton Valley at 4,520 bbls. and Bradley at 100 bbls., were unchanged.

Caddo light decreased 130 bbls., Caddo heavy 375, Homer 15, Haynesville 105, DeSoto-Red River, 195, Elm Grove 5, El Dorado 10, Smackover heavy, 395, Stephens 50 and Champagnolle 130. Daily average runs from the several pools were:

Louisiana	
Caddo light	11,505
Caddo heavy	3,645
Homer	4,365
Haynesville	6,310
DeSoto-Red River	4,000
Elm Grove	565
Bellevue	1,100
Cotton Valley	4,520
Urania	8,025
Pleasant Hill	850
Total	44,885
Arkansas	
El Dorado	5,100
Smackover, light	8,535
Smackover, heavy	66,545
Stephens	1,110
Nevada	1,750
Lisbon	2,320
Champagnolle	870
Bradley	100
Total	86,330
Both States	131,215

North Louisiana

Bossier Parish

Cartersville — Atlantic Oil Producing Co. is bailing No. 1 Bain, Section 31-23-11, total depth 3,064 feet. Louisiana Oil Refining Corp. plugged back from 3,091 feet to 3,050 feet in No. 1 Blanton, Section 23-23-12, drilled out to 3,085 and

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DEEP GAS SHOWING IN DE SOTO; RICHLAND EXTENDED 2 MILES

By D. H. Bancroft

SHREVEPORT, La., Mar. 12.—A showing of gas in Dixie Oil Co.'s deep test in DeSoto Parish on which it has been drilling for two years or more and an extension of 2 miles in the northern division of Richland gas production were the outstanding developments in wildcat operations here this week. However slight the show in the Dixie well, No. 1 Jenkins, Section 9-12-11, may have been it is possessed of a great deal of interest if not importance as an indication of commercial production at this deepest of all tests (in footage) in this territory. Humble Oil & Refining Co.'s test in Bellevue was deeper geologically, but it developed no shows at correlated level. The show developed when the well reached 6,149 feet, sufficient to get the cable tools in a jamb and cause a fishing job, a species of grief from which it has been unusually free—having had but two—and which at this depth is at to be long and expensive with chances against it. The show is also more than Gulf Refining Co. got in No. 1-C Williams, a 6,090-foot test in Section 31-13-11, up to that time, February, 1926, the deepest hole that had been drilled in this part of the country, for where the Dixie got a gas show Gulf abandoned its test on account of salt water.

Richland Extension

Richland's extension was Ouachita Natural Gas Co.'s No. 1 Cummings, Section 24-17-5, 2 miles west of United Carbon Co.'s No. 1 Clark in Section 20-17-6, and a mile north of Gulf Refining Co.'s No 1 Rhymes. Completed at a total depth of 2,425 feet it made 32,000,000 feet. A similar extension south and east of the southern division of proven territory is indicated in Noe & Meredith's No. 1 Boughton, Section 4-15-6. Two miles east of Moody & Seagraves' 54,000,000-foot No. 2-B Hemler in Section 6-15-6, and a mile south of their No. 1 McCoy, Section 32-16-6, the well blew out with 3,500,000 feet of gas, total depth 2,369 feet, but was lubricated to go deeper. At this depth it was 126 feet shallower than the Hemler well and 64 feet shallower than the McCoy, measured from the surface and not subsea elevations. But there are no such differences in surface elevations in that part of the country, which has as many hills in it as a pancake.

One other wildcat, or semiwildcat completion, during the week was a producer, W. R. Keever's No. 1 Kavanangh in Section 12-17-15, Union County, Arkansas, on the southern fringe of Smackover, being a 70-bbl. pumper, total depth 2,143 feet. Fifty per cent of its production, however, was water. In Garland County, 3 miles east of Hot Springs, H. H. Givans abandoned No. 1 Garrett, Section 1-3-19, a cable tool job that had been drilled intermittently since August, 1926. It was abandoned at 3,025 feet where the operators had claimed to have had a show of oil with fresh water after shooting a

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Not to take advantage of the scientific methods of drilling and cementing that caused the overproduction at Seminole is to pass up the very first step in true conservation. Oil can never be brought to the surface that is wasted underground. In the interest of our national petroleum resources, the methods used to prevent waste at Seminole should be extended to all the fields of the United States.

HALLIBURTON OIL WELL CEMENTING CO.
Duncan, Okla.

Eastern Lea County to Get Big Play

Interesting New Mexico Showing 5 Miles West of Texas Border. Another Carbon Dioxide Well in Jackson County, Colorado

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Mar. 10.—A show of light oil in the Cecil Bordages test near Nadine in eastern Lea County, New Mexico, at 3,060-70 feet, followed by 3,000,000 feet of gas at 3,110 feet, has served to quicken the interest in that area which appears to be scheduled for a big play by the wildcatters this summer. The Gypsy Oil Co. is the latest to announce a location, this being in Section 34-21-36, which, with the Marland and Empire Gas & Fuel tests, make a fairly good start in the campaign. Two new locations in Eddy and Chaves Counties were made during the week. The Producers & Refiners Corp. has abandoned its third test on the Hospah Dome in McKinley County.

In Utah, the Midwest Exploration Co.'s Ashley Creek test ran into water at 2,115 feet, but will be drilled down as it is not believed the Sundance has yet been reached.

In Colorado, the Continental Oil Co. has another gas well near its "ice cream" well on the North McCallum Dome in Jackson County, estimated at 30,000,000 feet a day, the gas being the same as found in the freak well which yielded a high-grade oil with carbon dioxide gas at a temperature of 110 degrees below zero. A new test in that county on a new structure will be drilled by the Producers & Refiners. Marland Oil Co. has announced the location of its southeastern Colorado test in Baca County. The Florence district is the center of interest following the entrance of the Texas Production Co. with some trades in acreage reported and prospects of competition for the Florence crude. The Midwest Refining Co.'s No. 4-M Shaw on the Iles Dome is showing water in the Morrison sand, and the Texas Production Co.'s No. 10 Knowlton made 740 bbls. first 24 hours following completion in the Sundance. Two completions were reported in the Florence district.

In Wyoming, the principal development was the enlargement of the Leonard Petroleum Co.'s holdings on the Oregon Basin Dome by the purchase of the Hoodoo Oil Co.'s leases. One well was completed in Salt Creek, and drilling operations were mostly routine in results.

New Mexico

A showing of oil followed by a considerable flow of gas in Cecil Bordages' No. 1 Jennie Hughes, CEL SW Section 27-19-38, on the eastern edge of Lea County, and only 5 miles west of the Texas boundary, quickened the interest in southeastern New Mexico the past week. This area appears to be scheduled for a big play by the wildcatters the coming summer and any development tending to confirm the favorable opinion of the district held by the major operators who have been blocking up acreage on an extensive scale at once attracts more than the ordinary attention. The Bordages test made just enough gas to be noticeable at 3,050 feet. Then at 3,060-70 feet it had a light show of oil followed by about 3,000,000 feet of gas at 3,110 feet. The shows were in sand and anhydrite. The well then was shut down to run steel line.

What makes the development especially interesting was that nothing was expected at that horizon. The test is located approximately 42 miles due north of the Texas Production Co.'s No. 1 Rhoades, in the southeastern corner of the county, and approximately the same distance southeast of the Maljamar Pool on the boundary between Eddy and Lea Counties. Spudding commenced last October under contract for a 4,000-foot test. The Midwest Refining Co., the Humble Oil & Refining Co., the Texas Production Co., the Roxana Petroleum Corp. and the Amerada Petroleum Corp. have spreads in the block.

The Midwest Refining Co.'s No. 1 State, NE cor. Section 9-19-38, is located approximately 4 miles north and a little west of the Bordages well. The showing in the Bordages test makes the Midwest well one of the most interesting tests now drilling in that area. It commenced spudding about the same time as the other well, but had bad luck when its rig was destroyed by fire, which caused several weeks' delay while another was being brought in and put up. However, it is now drilling again and is making hole at 1,780 feet in salt, anhydrite and lime. It topped the salt at 1,625 feet. The Midwest well is on what is known as the Hobbs high. The test was spotted after considerable geological work was done in which numerous pit holes were dug. The results were checked with surveys made with the torsion balance and magnetometer. The elevation is 3,532 feet and is supposed to be at approximately the highest point. It is for these reasons that the showings in the Bordages well 4 miles to the south make the Midwest test one that will be very closely watched during the next two months.

New Location by Gypsy Co.

Another development of the week was the announcement of a new location to be drilled by the Gypsy Oil Co. in the SW cor. Section 34-21-36e. The location is about midway between the Marland Oil Co's No. 1 Roberts in Section 20-23-35 and the Bordages test, and about 10 miles southeast of the new location made by the Empire Gas & Fuel Co. in Section 8-21-35. This is the first well to be drilled by the Gypsy company in that area where it has extensive holdings. A glance at the map indicates that the wells now drilling in Lea County and new locations announced are so spaced that some of them ought to demonstrate quite clearly the trend of the folding.

Other developments in Lea County include the following: Marland Oil Co.'s No. 1 Eaves, SW NE Section 19-26-37, 2 miles west of the Rhoades well, topped the salt at 1,173 feet and had a hole full of water at 1,320 feet. It is drilling at 1,510 feet and carrying the 12½-inch casing. Same company's No. 1 Roberts, SW cor. Section 20-23-35, 20 miles northwest of the Rhoades well, is moving in, and its No. 1 Seideman, SW cor. Section 4-25-36, midway between the Roberts and Rhoades wells, is building rig. Maljamar Oil & Gas Co.'s No. 2 Beardsley, Section 15-17-32, is still fishing at 4,295 feet.

In Eddy County, the Marland Oil Co.'s No. 1 Gardner, NE cor. SW Section 34-23-31, is moving in casing. Gates, Holman & Hehn's No. 1 Murdock, SW cor. NE Section 7-21-28, is drilling at 1,100 feet in white lime. R. D. Compton's No. 1 Vandergriff, NW NE SE Section 8-18-27 (corrected location) is shut down at 150 feet waiting for engine parts. Getty Oil, Inc., No. 2 Dooley (Hinkle), NW NW Section 24-20-29, topped the salt at 350 feet and is drilling in salt at 900 feet. Snowden & McSweeney's No. 1 Lawrence, NW cor. Section 35-20-29, is rigging up. Levers & Carper have made a location for No. 6 State in the SW NW Section 3-18-28, in the Artesia Pool.

Chaves County

In Chaves County, the Arena Oil Co.'s No. 1 Wilkins, NE cor. NW Section 18-13-21, is drilling at 3,200 feet in lime. A break in the formation is looked for within the next 50 to 75 feet. The Buffalo-Roswell Oil Co.'s No. 1 State, Section 24-11-27, which has been shut down for some time at 4,260 feet, is reported to have resumed drilling and to have made 5 feet of new hole since work started up. In DeBaca County, the Matador Oil Co. has made a location in the NE SW SW Section 6-4n-20e, in the northwestern corner of the county. This company is reported to have taken over the Woods and Barber block of 50,000 acres about half way between Vaughn and Fort Sumner, upon which a well was drilled to 303 feet in SW NW SW of the same section upon which the new location has been made. This is known as the Salada Creek structure. John W. McGee was reported recently to have acquired control of the Matador company.

In the northwestern area, drilling activities were comparatively quiet the past week. In San Juan County, the Huntington Park Oil Co.'s No. 1 Goede, SE Section 29-30-9, in the Blanco district, is drilling at 4,517 feet. The Union Oil & Refining Co.'s No. 2 Pine, SE SW Section 8-29-9, is drilling below 3,550 feet. This well was delayed at 2,950 feet for more than a year with a fishing job and at that depth it was showing some oil, believed to be coming from the bottom and forced up from the Mesa Verde sands. New hole made since then indicates that it has not yet reached that horizon and probably has some distance to go before encountering the objective. Continental Oil Co.'s No. 17 Santa Fe Corp. lease, Section 2-29-19, is drilling at 4,639 feet. San Juan Petroleum Co.'s No. 2, Section 9-29-13, is shut down at 2,885 feet awaiting return of contractor. Water shutoff was made at 2,850 feet, followed by another water sand. A. Johnson, trustee's, No. 1 Viles, SW Section 34-29-11, is drilling at 1,840 feet in muddy shale and is believed to be close to the Picture Cliff sand.

In McKinley County, the Producers & Refiners Corp.'s No. 3, Section 12-17-9, on the Hospah Dome, is being abandoned at 1,881 feet, having found water in the Mesa Verde sands.

Utah

The Midwest Exploration Co.'s No. 3, Section 23-5-22, on the Ashley Creek structure, in Uinta County, ran into sulphur water the past week at 2,115 feet, and will make a shutoff as soon as the formation is bottomed. The sand was topped at 2,065 feet, at which depth it had a show of oil, followed by the water at 2,115 feet. The hole is bottomed at 2,322 feet in sand and shale, this formation being continuous from 2,065 feet. This test, which has the Sundance sand for its first objective, had 29,000,000 feet of gas in the Morrison at 1,655 feet. Opinions as to the identity of the horizon in which the water was encountered vary, and some are of the opinion that the Sundance has not yet been encountered. In any event, the plans are to go ahead and it is probable that the test will be carried down to the Park City sand in the Pennsylvania formation, which will require drilling to below 4,000 feet. Same company's No. 1 Early, Section 13-4s-6w, Duchesne County, is drilling at 3,078 feet in gray limey shale.

The Texas Production Co.'s No. 1

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DEEP LIME WELL IN TURNER VALLEY; SECOND LARGEST WELL COMPLETED

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Mar. 10.—In the Turner Valley Field, southwest of Calgary, Spooner Oils' No. 1, LSD 12, Section 13-20-3w5, blew into production in the Madison limestone at 4,950 feet with a big flow of wet gas. The enormous gas pressure let loose so suddenly that the tools were shot up in the hole and jammed with the cable. Fragments of lime from the bottom of the hole were thrown high over the derrick. Shortly after coming into production the well froze tight, and at last reports the tools were still frozen in the hole, with the crew trying to get them out. The cable has been disentangled and got out of the hole. No estimate has been made of the wet gas production or potential crude naphtha recovery, but when the hole is clear it will probably make better than 100 bbls. a day. About 3,000,000 feet of wet gas comes from the higher levels above the Madison. Indications are that the deep lime is considerably fissured, which should result in ready production. Spooner Oils, Ltd., is largely financed by the same interests that drilled Vulcan Oils No. 1. It is the third deep lime producer to come in inside of a little over a week.

McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, which came into production a short time ago in the Madison limestone at 3,915 feet is officially stated to be making around 10,500,000 feet per day of wet gas, with a crude naphtha production of 135 bbls. a day. This makes it the second largest producer in the Turner Valley Field. Since it came in, the well has been showing a slight increase in gas pressure and crude naphtha production. The production is being delivered to the Royalite Oil Co. pipe line. McLeod No. 4, same LSD, has derrick up and equipment is being installed.

Dalhousie Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, which got the producing horizon in the Madison limestone at 4,565 feet, froze over shortly after blowing into production, and at last reports was still tight. The drilling in the limestone was done with a diamond drill outfit. Hot water is being run down the stem in an effort to clear the hole. When it blew in the well looked like a big producer, and possibly a rival to Royalite No. 4 gusher. Considerable difficulty is likely to be experienced in getting the tools out and bringing the well into steady production. If this can be done, however, the production is quite likely to run from 200 to 500 bbls. a day.

Royalite Operations

Royalite Oil Co.'s No. 6, LSD 16, Section 31-10-2w5, is at 4,280 feet and drilling. Royalite No. 8, LSD 9, Section 12-20-3w5, is drilling at 3,398 feet. Royalite No. 9, LSD 6, Section 13-20-3w5, is at 3,758 feet and drilling. Royalite No. 10, NE Section 12-20-3w5, which is in production at 2,332 feet, is preparing to run tubing. Royalite No. 11, LSD 10, Section 12-20-3w5, is drilling at 826 feet.

Dalhousie Oil Co.'s No. 5, LSD 16, Section 30-19-2w5, has finished running tubing at 4,900 feet. Dalhousie No. 6,

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Deeper Sand Is Productive at Ventura

Associated Oil Co. Completes Good Well at Depth of 7,210 Feet. Rincon May Develop Deeper Production Later

By L. P. Stockman
Staff Correspondent, California Fields.

LOS ANGELES, Calif., Mar. 10.—The Associated Oil Co. has just finished No. 102 Lloyd in the eastern part of the Ventura Avenue Field at 7,210 feet and this new well, which will be tanking oil within the next week or 10 days, will be the deepest producer in this district as well as the largest deep sand completion in the world. The Associated's latest completion is two locations west and north of No. 101 Lloyd, which, incidentally, was brought in flowing 1,500 bbls. per day from the 5,236-foot level two years ago, in March, 1926, to be exact. No. 101 has been a very consistent producer since completion and since No. 102 is 1,974 feet deeper it is logical to assume that it too will hold up for a long period. The former well is located in Hall's Canyon and it will be recalled that the Associated installed the gas trap on top of the hill instead of down in the canyon and gravitated the oil production from this point to the company's tank farm located on the opposite side of the ridge. The installation of this gas trap at the highest point between the well and tank farm instead of being erected at the well itself, as is usually customary, eliminated the necessity of erecting flow tanks and pumping equipment as the exceptionally heavy gas pressure was more than sufficient to kick the daily production up the additional 550 feet in elevation.

Deeper Sand Discoveries

The consistent development work which has characterized operations in the Ventura Avenue Field during the past several years has resulted in the establishment of several deep sand records recently. It has only been during the past 60 days that operators have gone below the 7,000-foot level but three prolific producers, in addition to No. 2 Lloyd, which is not yet technically on production, have been chalked up during this period and additional deep wells may be anticipated during the next several months. Although the Ventura Avenue Field is more than 11 years old, having been discovered by E. J. Miley back in 1916, its great importance was not recognized until along about 1922, since which time, however, production has increased by leaps and bounds. The completion of four wells below the 7,000-foot level since January 1, 1928, is a source of personal gratification in as much as attention was directed to this possibility almost two years ago when 5,500 feet was regarded as a deep completion.

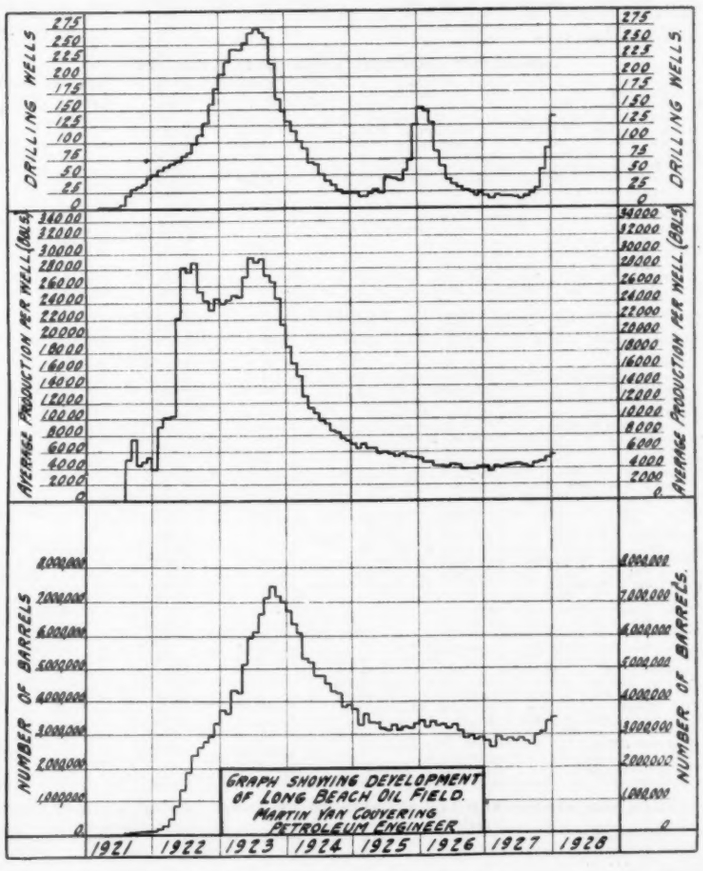
Not a well has yet been drilled entirely through the lower zone and for this reason it is highly probable that commercial production may even be encountered down to the 8,000-foot level. The Ventura Avenue Field has enormous drainage area and contains the thickest oil bearing formation in the world and the exceptionally high saturation guarantees an unusually large ultimate recovery. This field has produced a total of over 47,000,000 bbls. of crude to date and since it is generally considered the equal of Long Beach there is at least an additional 300,000,000 bbls. of oil awaiting recovery under present methods. The Associated Oil Co. controls the largest amount of productive acreage in this field and lease maps indicate that its large holdings have only really been scratched. The Shell also holds a large amount of productive acreage in this field and the future earnings of both companies will reflect the development of these immensely valuable holdings.

Rincon

Operators in the Rincon Field, located approximately 6 miles west of the prolific Ventura Avenue Field, have practically given up any thought of developing commercial production in the shallow State zone and as a consequence several projects have been temporarily suspended pending the outcome of the exploratory work now under way. As was stated when this field was opened up last year, it is my opinion that the real potentiality of the Rincon Field lies in deep drilling. Fifty per cent of this production has already been fulfilled and I am inclined to believe that commercial production will eventually be developed in a lower and more prolific horizon, although it may be several months before this point is reached, due to slow drilling resulting from the universal desire to prevent the precipitation of any general drilling campaign until conditions improve.

The effect which this field will have on state production during 1928 is problematical and a lot depends upon the existence and development of the projected lower horizon. Every well drilled at Rincon up to the present time is carrying a hole sufficiently large enough to permit exceptionally deep drilling and if prolific production is secured this field may jump into the limelight almost over night as some 20 or 25 projects could be deepened and put on production within 30 days after the initial completion in the lower horizon. There has not been any change in the status of any tideland drilling permits and consequently there have not been any wells drilled out in the open ocean beyond the tideline. The General Petroleum succeeded in building a derrick foundation on the Ferguson tideland permit before the present litigation broke out and this basic work cost in excess of $25,000.

It has been generally supposed that it would be impossible to drill any considerable number of wells out beyond the tide line in the open ocean at Rincon but a recent survey indicates that it is feasible to prosecute development work at least 800 feet out beyond the tide line. The present winter has been a rather mild one in California and it is therefore impossible to determine the degree of safety with which this deep ocean drilling could be done. Old timers at Ventura claim that 15 and 20-foot breakers are not at all uncommon during a heavy winter season and the tremendous force of such great volumes of water would consequently be expected to retard drilling and damage producing wells. If any exceptionally heavy weather is encountered at Rincon during the balance of the rainy season it may result in considerable damage to some of the drilling projects located along the ocean front and within a stone's throw of mean high tide. The Pan American threw up a bulkhead around No. 1 State, its discovery well, several months ago but it is doubtful is this breakwater, which consists of a number of piles interwoven with wire mesh and cable, would withstand the continuous pounding of a heavy sea for any length of time.



Midway-Sunset

The Republic Petroleum finished an exceptionally large flowing well in the Midway-Sunset Field during the early part of the past week, when its No. 25 in Section 8-32-28 came in unexpectedly flowing 1,061 bbls. of clean 22.8 gravity oil daily. The importance of this completion lies in the fact that it will undoubtedly precipitate additional drilling by both the Republic Petroleum and Chanslor-Canfeild Midway Oil Co. The Republic interests control 480 acres in one piece and the company's latest completion is one of a group of shallow producers ranging in age from 10 to 20 years. No. 25 is located in the extreme southwestern corner of the northwest quarter of Section 8-32-23 and is a direct offset to Nos. 3 and 35 of the Chanslor-Canfield Midway Oil Co., both of which will undoubtedly be deepened at once. The Republic's new well was a former shallow producer pumping around 15 bbls. per day from a depth of 800 feet but the present flow, which is steady and without pulsation, is coming from a sand of several hundred feet in thickness located above the 2,704-foot level. The importance of the Republic's recent completion is still undetermined, due to the lenticular condition of sands in this field. The Republic's new producer may have possibly opened up a new zone for development and then again it may be purely a local condition similar to the large Maricopa Brown Shale production developed by the Obispo Oil Co. a few years ago. It will take another well or two to determine whether the Republic's new well is producing from a lens or a well-defined horizon. The Standard's No. 4 Rass out in the Maricopa Flats section of the Midway Sunset Field, failed to show either a large or sustained production when put on a preliminary test at 5,450 feet during the early part of the past week and it will be cleaned out and worked over.

Long Beach

There was only one new well finished in the Long Beach Field during the past week but several additional completions may be anticipated during the next 10 days. The latest acquisition in this field was the Richfield Oil Co.'s No. 2 Freeman, which came in a few days ago flowing 2,715 bbls. of clean 29.8 gravity oil and 1,800,000 feet of wet gas daily from the 6,300-foot level. The Richfield's new well, which is located in the Lovelady district, is the tenth successful completion to be finished in the deep zone since the intensive development of that horizon got under way last fall. The Richfield has experienced unusual success in its deep zone development and a large part of the company's present daily production of approximately 30,000 bbls. is coming from the lower horizon. The Richfield will probably not be in a position to bring in any additonal new wells for another 30 days, but a check indicates that a number of other operators will undertake the problem of boosting field production where the Richfield left off. The Shell has only finished a few wells in the deep horizon at Long Beach during the past several months, due to the fact that instead of deepening former upper zone producers this company's drilling program involved the starting of new wells. As a consequence of this policy, the Shell will probably complete 15 or 20 new wells within the next 30 days and since a large number of them are located in highly prolific territory it is unnecessary to say that the company will again resume its original position as the largest single producer in the Long Beach Field. The Shell is running 28 strings of tools in the Long Beach Field at the present time and the company will probably continue its present large drilling program for several months, as additional new rigs are going up on the Alamitos, Andrews, Cherry Hill, Marcellus, Nicholson, Wells and Pickler leases. The Union Oil Co. is also expected to list several new wells for completion in this field during the next 30 days and favorable production is anticipated. One of the new wells which

should be finished by the Union is No. 13 Long Beach Community, which has probably caused the Union's field department more worry than any other single project in the State. This well was given a preliminary production test several weeks ago but failed to show any kick and drilling was accordingly resumed. The bit was still in the pay late yesterday afternoon at 6,415 feet and recent cores have been exceptionally promising, the degree of saturation being unusually heavy.

Santa Fe Springs

California may have a battle of the drill if a new deep zone is opened up in the Santa Fe Springs Field below the existing Meyer horizon. George F. Getty, one of the most successful independent operators in the State, has accepted the recommendation of the conservation committee and work has accordingly been suspended on his deep test, No. 10 Mitchell, which was being carried down in search of a new deep zone. Getty's move did not come as a surprise and it is hoped that similar work by other operators will be discontinued and indefinitely suspended until conditions improve, as the opening up of a new horizon at Santa Fe Springs would prove very disastrous at this time, especially in view of the fact that it would result in a competitive deepening campaign due to the proximity of producing wells in the town lot area and might result in a very substantial increase in daily production.

Deep sand exploitation in the Long Beach Field has again diverted attention away from the older fields in the Los Angeles Basin and as a consequence drilling operations have been reduced to a minimum. Richfield, Coyote, Brea-Olinda and Montebello are all showing the effect of the numerous prolific producers being completed at Long Beach and the Union. Standard, General Petroleum, Shell and California Petroleum will probably temporarily suspend all drilling activity in these four fields upon the conclusion of the work now under way. The Union is winding up its present drilling operations at Richfield and if everything runs according to schedule the six wells under way in this district at the present time should be completed within the next few weeks. Nos. 5, 11 and 12 on the Stern lease have about 400 feet to go, while Nos. 15 and 17 on the Y.L.G. property are within 100 feet of completion. No. 6 Chapman, scheduled to be finished at 4,750 feet, passed the 4,700-foot level this morning and should therefore be finished within the week. In the Brea-Olinda Field the company may continue to run one or two strings of tools on the Stearns or Naranjal properties if the present move to curtail production does not include that field. The Shell does not have any leases in the Richfield district and is consequently centering its outside drilling activities at Brea-Olinda, where the company has several immediate potential producers on the Fisher and Orange properties. The Standard is running five strings of tools in the Montebello Field but operations in this area are strictly limited to the development of production on outlying properties and any production secured will therefore be relatively small.

Seal Beach

The Marland Oil Co. has just finished another deep zone producer in the northern part of its Selover Lease adjoining the Alamitos Heights town lot area and, with George F. Getty's No. 12 scheduled for early completion, it is quite probable that some definite indication of the potentiality of the deep zone in the town lot area will be available early next week. The Marland's latest completion in this section is No. 19 Selover, which came in flowing 1,025 bbls. per day of 29.3 gravity oil from the 6,470-foot level. This is the best well yet finished in the deep Bonner zone and marks the third successful completion to be listed by the Marland Oil Co. The Richfield was the first concern to secure commercial production in the deep Bonner zone, located below the 6,000-foot level, when that company brought in No. 1 Bonner flowing 635 bbls. per day from 6,460 feet some 60 days or so ago. The Richfield's Bonner well is more favorably located with respect to the Alamitos Heights structure than the recent completion of the Marland and the relatively small production secured by the Richfield interests is due to the fact that only a limited penetration was taken in the oil sand, whereas subsequent completions have been taking around 400 feet. The success which has attended the operations of the Marland in developing production in the deep Bonner zone, has resulted in the starting of similar work by other operators. The Petroleum Securities already has two projected deep zone producers headed down to the Bonner sand and if they result in satisfactory commercial production the company will carry five or six more projects down immediately.

George F. Getty finished his No. 12 Alamitos in the deep sand late last week at 6,500 feet but it is not yet on steady production. This well started flowing by heads several days ago but it was subsequently killed in order that it might be tubed and given every chance to show maximum production. The Marland should have two more deep-sand projects on production in the very near future and both of them, Nos. 12 and 13, should be tanking oil within the next 30 days. The Standard has not yet made any attempt to develop production in the deep Bonner zone but this company does not overlook any bets and preparations are accordingly being made to spud in No. 18 San Gabriel, a new well, and redrill and deepen No. 14 on the same property. The Associated recompleted its No. 5 Bryant, located in the extreme eastern part of the older section of the Seal Beach Field, a few days and this project, which was redrilled and deepened to 4,944 feet, was returned to production flowing 876 bbls. of clean 26.1 gravity oil daily. The hole was finished with a 4¾-inch liner carrying 320 feet of perforated and the output is flowing through a 1-inch bean under a pressure of 375 pounds.

Huntington Beach

The Standard finished another well on the Bolsa Chica lease in the older section of the Huntington Beach Field during the past week and incidentally increased its daily production 192 bbls. The company's latest acquisition is No. 32, a new well which was brought in flowing from a depth of 4,352 feet. Two additional drillers on this lease, Nos. 28 and 34, should be tanking oil within the next 30 days. The Ambassador Petroleum Corp., an affiliated concern of the Wilshire Oil Co., completed No. 11 Huntington in the town lot area several days ago but the initial production, 135 bbls. daily from the 4,350-foot level, is not especially satisfactory due to the unusually large cut, aggregating approximately 28 per cent. Drilling operations in the Huntington Beach Field have ceased to exert any appreciable effect on State production and while they will continue to become of less importance as time goes on we may anticipate the completion of additional new wells, especially by the Standard Oil Co. as this concern has a considerable amount of undrilled proven acreage.

Kern River

Although drilling operations along the West Front of the Kern River Field are not as numerous as heretofore there were several new wells finished during the past seven-day period and three or four more completions should be chalked up within the next few days. The Chanslor-Canfield Midway Oil Co. has just brought in two new wells in Section 23-28-27, both of them being finished at 2,160 feet. No. 16, the first to come in, resulted in a 132-bbl. pumper, while No. 18 made 149 bbls. of 15.1 gravity oil during the initial 24-hour test. Nos. 19 and 20 in the same section were spudded in immediately upon the completion of these two new producers and if drilling operations are not interrupted they should be in about the middle of April. The Petroleum Securities finished No. 11-A in Section 22-28-27, and got a 184-bbl. pumper of 14.6 gravity oil from 2,445 feet, the hole having been finished with an 8⅝-inch oil string carrying 255 feet of 100-mesh screen. The General Petroleum's No. 14 Young, a new well in Section 14-28-27, registered an initial pumping of 141 bbls. daily from 2,097 feet and this project will be followed into completion within the next few days by No. 6 Sill, which is at present standing cemented at 2,076 feet. The Standard has just completed two new wells and both of them should be tanking oil within the next five or six days. The California Petroleum will also increase its list of producers in this area as it has just concluded work on the initial well on the M. O. F. property in Section 14-28-27.

The completion last week of No. 1 Jewett in Section 29-28-29, by the Shell extended the outer limits of the Round Mountain Field, located approximately 15 miles northwest of Bakersfield in Kern County, and this district is now approximately 3 miles long and 2 miles wide. The Shell deepened No. 1 Jewett on two separate occasions, the last test indicating a potential production of 400 bbls. daily from the 1,690-foot level. No. 2 Jewett was spudded in during the latter part of last week and this well, which is located approximately 1,500 feet southeast of No. 1, will be watched with considerable interest as it may extentd the field still further. The Honolulu Consolidated is stepping right along with a

(Continued on Page 135)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location—	S-T-R	Depth	Status
Associated, No. 1 Cypress, Potrero	34- 2-14	5,408	testing
Associated, No. 2 Cypress, Potrero	34- 2-14	3,400	hd. sd. drilling
Smith & Carpenter, No. 1 Smith, Potrero	35- 2-14	5,282	gas well
Pet. Securities, No. 1 Connolly, Potrero	27- 2-14	4,700	sd. sh. drilling
Hurst Oil Corp., No. 1 Inglewood, Los Angeles Co.	28- 2-14	3,772	resume work
Mont. Park Oil Co., No. 1 Browning, Mont. Park	26- 1-12	3,940	suspended
Associated, No. 1 Patterson, Pico	13- 2-12	5,440	hd. sd. drilling
Shell, No. 1 Mission, San Fernando	4- 2-15	4,953	abandoning
Shell, No. 2 Mission, San Fernando	4- 2-15	Rig	rigging up
Andrews, Otis, No. 1 Lancaster, Los Angeles Co.	23- 8-13	1,510	hd. sd. drilling
Woods, D. H., No. 1 Lancaster, Los Angeles	5- 7-10	Mtl.	building rig
Security Pet. Co., No. 1 Lynwood, Los Angeles Co.	13- 3-13	4,178	sd. sh. drilling
Dominguez Ext., No. 1 Compton, Los Angeles Co.	27- 3-13	5,510	pipe trouble
San Clemente Oil Co., No. 1 Peck, Hawthorne	20- 3-14	5,760	suspended
Shell, No. 1 Dupree, Hawthorne	29- 3-14	5,380	fishing
Scott & Carrier, No. 1 Hawthorne, L. A. County	33- 3-14	140	suspended
White Behr, No. 1 Watson, L. A. County	21- 4-14	4,614	hd. sd. drilling
Buttrum, F. W., No. 1 Richfield, Orange Co.	36- 3- 9	3,650	gr. sd. drilling
Ohio Oil Co., No. 1 Anaheim, Orange Co.	9- 4-11	1,802	hd. sd. drilling
Olympic Ref. Co., No. 1 Sunset Beach, Orange Co.	19- 5-11	4,650	sd. sh. drilling
Kneuper, A. D., No. 1 Seal Beach, Orange Co.	10- 5-10	Mtl.	building rig
Getty, Geo. F., No. 1 Seal Beach, Orange Co.	14- 5-12	2,900	hd. sd. drilling
Shell, No. 1 Stern, Orange Co.	22- 3-10	4,000	hd. sd. drilling
Hemet Pet. Co., No. 1 Ward, Riverside Co.	8- 5- 1	2,364	hd. sd. drilling
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	2,390	hd. sd. drilling
Davenport O. & G., No. 1 San Marcos, San Diego	30-12- 2	365	hd. sd. drilling
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	378	hd. sd. drilling
Mills, J. P., No. 1 Pueblo, San Diego Co.	18-16- 3	2,300	hd. sd. drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Bolsa Chica, No. 1 Kettleman, Kings Co.	30-23-19	3,502	plugging back
General Pet., No. 2 Ochsner, Ket.leman Hills	28-22-18	6,770	showing gas
South Coalinga, Well No. 1 Kettleman Hills	35-24-19	3,110	sd. sh. drilling
Monocline Dev. Co., Well No. 1 Kettleman Hills	7-21-21	4,308	suspended
McPhail, Hugh, Well No. 1, Kettleman Hills	13-24-18	2,100	bailing
Milham Explt'n., No. 1 Kettleman, Kings Co.	2-22-17	6,835	br. sh. drilling
Shell, No. 2 Berlywood, Moorpark	32- 3-20	6,420	cleaning out
Star Petroleum, No. 2 Canet, Ventura Co.	13- 3-23	5,670	hd. sd. drilling
Standard, No. 4 Saticoy, Ventura Co.	22- 2-22	918	sd. drilling
California Western Oil, No. 1 Elkins, Ventura Co.	5- 3-19	122	sd. drilling
Exline, Emma, No. 1 Saticoy, Ventura Co.	35- 3-21	Rig	rigging up
Petroleum Sec., No. 1 Diablo, Ventura Co.	26- 5-18	4,215	hd. sd. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	4,002	suspended
Shell, No. 1 Strathern, Ventura Co.	6- 2-18	4,211	hd. sd. drilling
Shell, No. 1 Oxnard, Ventura Co.	35- 2-22	1,983	to abandon
Shell, No. 2 Oxnard, Ventura Co.	35- 2-22	Rig	rigging up
Miley Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	980	cleaning out
Keck Inv. Co., No. 1 Fillmore, Ventura Co.	35- 4-20	4,500	hd. sd. drilling
McAdams, J. E., No. 1 Buttonwillow, Kern Co.	26-29-23	4,685	set pipe
Milham Explt'n., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well
Milham Explt'n., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well
Milham Explt'n., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	400,000 feet
Milham Explt'n., No. 4 Buttonwillow, Kern Co.	5-28-23	.....	location
Doheny-Stone, No. 1 Salisbury, Kern Co.	7-29-24	4,150	deepening
Sou. Calif. Gas Co., No. 1 Buttonwillow, Kern Co.	4-28-23	2,725	plug. back
Richfield Oil Co., No. 1 Semitropic, Kern Co.	21-26-22	1,620	hd. sd. drilling
Pacific Eastern, No. 1 Union Ave., Kern Co.	6-30-28	5,640	plugging back
Pacific Eas.ern, No. 2 Union Ave., Kern Co.	6-30-28	4,250	sd. sh. drilling
Jackson & Chamberlain, No. 1 Bakersfield, Kern	19-29-28	Rig	rigging up
O'Donnell, J. E., No. 1 Fruitvale, Kern Co.	31-28-27	.....	location
O'Donnell, J. E., No. 1 Greenfield, Kern Co.	31-30-28	890	sd. drilling
Superior Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,270	hd. sd. drilling
Stabler, W. W., No. 1 Comanche Point, Kern Co.	23-32-28	1,607	sd. drilling
Midway Northern, No. 1 Edison, Kern Co.	29-29-30	3,200	hd. sd. drilling
Shell, No. 1 Mon Bluff, Kern Co.	3-28-28	4,200	hd. sd. drilling
North American, No. 1-A Delano, Kern Co.	5-25-26	4,340	sd. sh. drilling
Fresno Madera Oil Co., No. 1 Clovis, Fresno	18-12-21	4,016	fishing
Barneyberg Oil Co., No. 1 Brown, San Luis Obispo	26-32-14	2,296	cleaning out
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	3,130	suspended
Richfield, No. 1 Carissa, San Luis Obispo Co.	15-29-17	2,610	br. sh. drilling
Union Oil Co., No. 1 Huasna, San Luis Obispo Co.	34-32-15	1,100	hd. sd. drilling
San Luis Syndicate, Well No. 1, San Luis Obispo	29-31-15	2,470	sd. sh. drilling
Sequoia Oil Co., Well No. 1, San Mateo Co.	13- 7- 5	1,608	br. sh. drilling
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 5	5,903	hd. sd. drilling
Shell, No. 1 Butts, San Mateo Co.	16- 6- 5	1,701	reaming
Shell, No. 1 Mossi, Petaluma	8- 5- 6	1,440	gas well
R. Y. Hamlyn, Well No. 1, Alameda Co.	35- 2- 2	122	sd. drilling
Thomas & Hammill, Well No. 1 Alameda Co.	16- 3- 2	1,070	water trouble
Tepesquit Oil Co., Well No. 1 Santa Barbara Co.	3- 9-32	1,692	cleaning out
Becker, Geo. F., No. 1 Summerland, Santa Barbara	33- 4-25	3,045	br. sh. drilling
Twin State Oil Co., No. 1 Modoc, Santa Barbara Co.	20- 4-27	2,500	sd. sh. drilling
Fort Wayne Synd., No. 1 Goodcell, Madera Co.	22-10-17	2,250	skid rig
Continental Oil Co., No. 2 Smith, Colusa Co.	31-18- 4	4,300	cleaning out
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	370	hd. sd. drilling
Marland Oil Co., Well No. 1 Bradley, Monterey Co.	32-24-11	781	hd. sd. drilling
Shell, No. 1 Bradley, Monterey Co.	32-24-12	.....	building road
North Counties Oil Co., Well No. 2, Humboldt Co.	36- 2- 1	1,760	oil in hole
Humboldt Oil Co., Well No. 1, Humboldt Co.	6- 2- 1	2,860	hd. sd. drilling

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This Week	Daily Average	Total Last Week	Daily Average	This Year to Date	Same Time Last Year
Crude oil	82.625	11.804	86,007	12,287	1,348,969	1,547,431
Fuel oil	.....	.....	.....	.....	.....	1,845,308
Diesel and gas oil	.....	.....	.....	.....	449,759	1,019,661
Gasoline	158.059	22.580	77,580	11,083	1,888,264	1,583,291
Coastwise—						
Crude oil	497.940	71,134	485,908	69,415	2,837,904	5,843,389
Fuel oil	294.759	42,108	355,569	50,796	3,343,592	2,901,089
Diesel and gas oil	642	92	10,610	1,516	191,930	53,071
Gasoline	191.761	27,394	250,783	35,826	2,222,398	1,752,066
Kerosene	8.250	1,179	.....	.....	22,865	40,605
Tops	.....	.....	.....	.....	77,492	.....
Exports—						
Crude oil	39,500	5,643	.....	.....	422,808	727,007
Fuel oil	407.280	58,183	298,937	42,705	4,637,323	5,683,503
Diesel and gas oil	72,511	10,359	.....	.....	525,592	163,933
Gasoline	63,489	9,070	154,427	22,061	837,442	403,822
Kerosene	87,444	12,492	90,186	12,884	822,572	426,632

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	97,609	13,944	265,304	251,458
Gasoline	.....	.....	176,105	25,158	330,343	507,916
Lubricants	.....	.....	.....	.....	69,854	58,110
Coastwise—						
Fuel oil	74,994	10,713	128,886	18,414	758,116	1,157,857
Diesel and gas oil	.....	.....	50,033	7,148	68,442	134,308
Gasoline	66,801	9,543	32,188	4,598	586,050	985,193
Kerosene	25,901	3,700	.....	.....	63,149	30,674
Exports—						
Crude oil	.....	.....	25,029	3,576	25,029	.....
Fuel oil	.....	.....	10,950	1,564	448,256	295,851
Diesel and gas oil	.....	.....	10,400	1,486	10,400	.....
Gasoline	130,234	18,605	117,946	16,849	908,250	910,133
Kerosene	.....	.....	.....	.....	141,420	238,722
Lubricants	.....	.....	.....	.....	.....	9,120

Announcing New and Outstanding Improvements

in the **D+B SIMPLEX INSERT PUMP**

QUALITY FIRST D+B TRADE MARK

Distinct & radical changes of progressive character which tend to strengthen and simplify the complete pump assembly

Pulls With The Rods

1. A New Hardened and Ground Valve Rod Guide, fitted to approximately one-thousandth of an inch against the pump head, forms a tight seal and eliminates the possibility of sand dropping down around the head and between the tubing and pump shell. Minimizes sanding up and makes pulling very much easier.
2. A New Type of Lock Sleeve Assembly on bottom of pump which positively maintains the pump in correct position, at the same time allowing for positive disengagement of the locking device when the pump is removed from the well. Consists of a double type tubing shoe with split lock, which requires only 450 pounds to lock in place but 2000 pounds to pull out. Locking is effected by the weight of the rods pushing the pump tube into the double pump shoe.

Valve Rod Guide Assembly

3. The New Type Lock is a positive shut-off seat at the bottom, ground to fit, being held rigidly in place by the spring tension of the lock sleeve. A gas anchor may be used if desired.
4. The Seal at top, together with the lock at the bottom, makes the pump absolutely rigid while operating. There is no whipping or twisting to wear on the pump parts.
5. Should it be necessary to renew the shoe seat, the lower half of the shoe can be unscrewed and removed while the upper half need never be touched, permitting easy inspection or replacement.
6. The entire working barrel and plunger is lowered into and withdrawn from the well on the sucker rods, making it unnecessary to pull the tubing when pump mechanism is removed for adjustment or replacement.
7. All parts made to gauge and interchangeable. A special jack screw can be furnished to force the pump out of jacket before running in.

The D & B Simplex Insert Pump is the finest pump of this type ever produced, now perfected to an exceptionally high degree. Complete specifications and drawings will be furnished on request.

Lock Sleeve Assembly Complete

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LOS ANGELES, CALIF. DALLAS, TEXAS.

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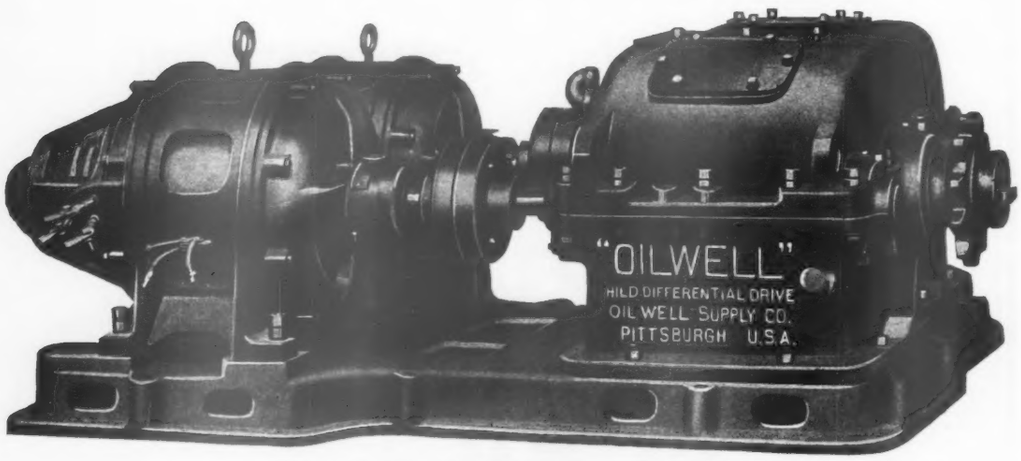
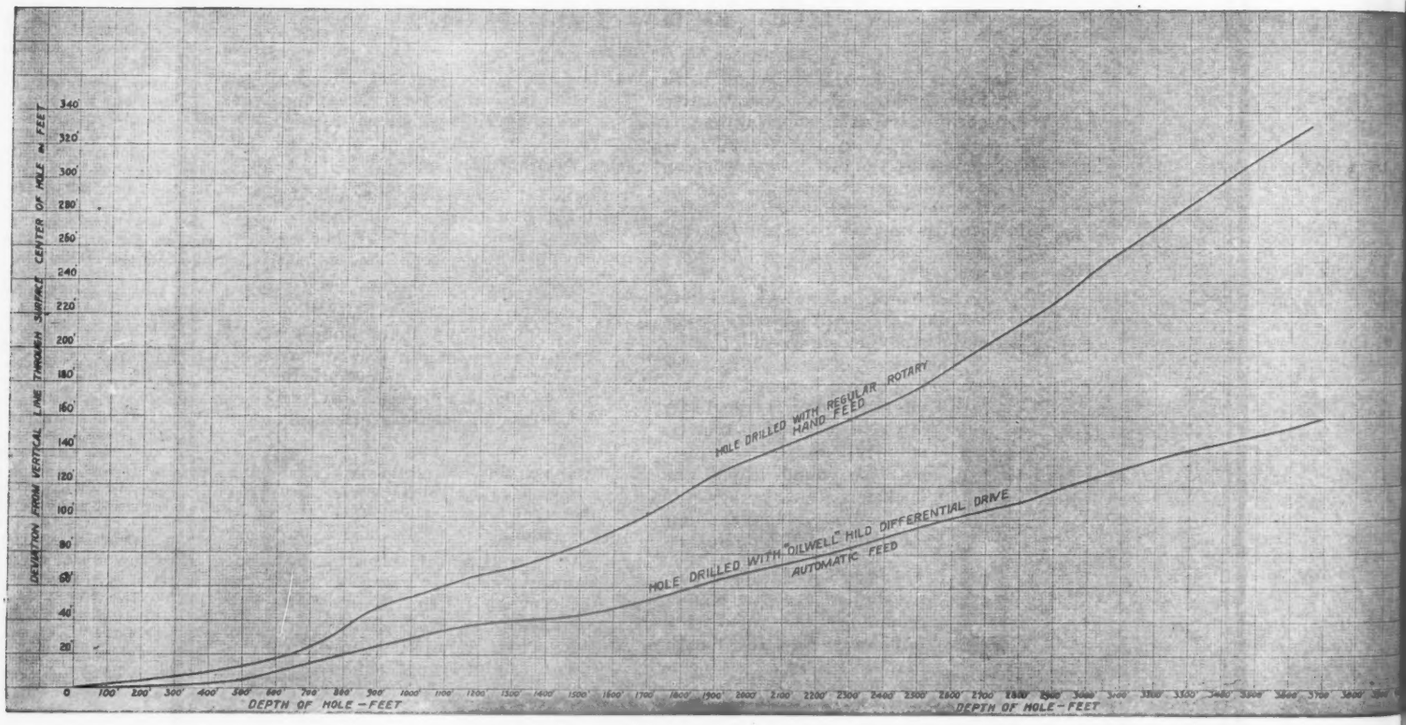
"OILWELL" PIONEERE
ADVANCE IN DRIL



The "OILWELL" Hild Differential Drive



Graph showing deviation of holes from the vertical
(Surveyed by the Alexander Anderson Method)

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THE "OILWELL" HILD DIFFERENTIAL DRIVE

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THE FIRST successful automatic feed and control developed commercially for Electric Rotary Drilling was the **"OILWELL"** Hild Differential Drive.

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Only slight changes have been made in the design of the **"OILWELL"** Hild Differential Drive since the first unit blazed the way to higher efficiency and greater accomplishment in rotary drilling. The first installation is still in use after drilling over 50,000 feet of hole with no repairs.

With this device the bit is automatically fed and automatically retrieved or lifted upon suddenly encountering hard formations.

Additional advantages are:

1. Faster Drilling.
2. Straighter Hole. (See graph on opposite page).
3. Cheaper Drilling—less wear and tear on the drilling equipment.
4. Deeper Drilling Range.
5. Uniform Feed Regulation for Coring.

For Further Information Inquire at Any of Our 100 Branches

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...running from 250 ft. m... inum to 616.1 ft. maximum with an ave... age of 42[illegible] ft. on a 3000-ft. hole.

Automatic Electric Rotary Drilling

The most signal advance in drilling equipment has been made through the introduction of the Hild automatic differential electric drive, which has now been in use for approximately 3 years. The first outfit was installed on the property of the Chanslor-Canfield-Midway Oil Co. at Torrance, Calif., in December, 1923, as an experiment. It was successful from the start and has been in continuous use ever since. It is now drilling its fourteenth hole, has drilled a total of 50,000 ft. with only minor repairs, and is still in good condition. The cost of drilling with the automatic electric rotary shows up favorably with that of the hand-fed electric rotary. It has the additional great advantage of drilling a straighter hole than can be drilled by hand and at a greater speed. The pressure on the bit is automatically varied according to the resistance encountered in the formation, thereby eliminating to a great extent the human element. This gives the driller more freedom and enables him to supervise other work about the rig.

In soft formations maximum drilling speed is maintained, and as the bit enters harder rock causing the drilling motor to slow down, the regulating motor immediately takes up part of the weight of the drill pipe, which removes some of the load from the bit and thus eliminates crowding, the frequent cause of divergence in rotary holes. The outfits are very popular with the drilling crews and are affectionately called "push-button rigs."

Enough holes have now been drilled with the automatic rigs to establish the following advantages: 1, A 50 per cent reduction in the number of "twist offs" of the drill pipe; 2, a reduction in wear on the drill pipe, tool joints and casing; 3, a decrease in upkeep expense on wells after being placed on pump; these advantages all being due to the straighter hole drilled.

The automatic outfit consists of a differential gear unit with a 75-hp. drilling motor, a 35-hp. regulating motor and necessary equipment. The motors are capable of developing 435 horsepower.

...roved D... W... Works

** Extract from a paper by Robert R. Boyd in collaboration with Ward B. Blodget, presented at New York meeting, A.I.M.E., February, 1927.*

SUPPLY CO.

FIEL...UIPMENT

BRANCH STORES IN ALL OIL FIELDS

"OILWELL" ESTD. 1862 TRADE MARK. (REGISTERED)

Midland County Well Makes 30 Bbls.

Michigan Test Drilled to Dundee Sand Found Production at 3,533 Feet. Flowed 16 Bbls. in Seven Hours

By Whit
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Mar. 12. — The finding of what looks like a commercial producing well in the Dundee sand, far away from any producing area in Michigan, has once more set oil men to wondering what will be the next find. First came the Saginaw Field which kept the drill busy for two years, but after attempts to extend the producing area of the field any great distance there was speculation if that would be the only production worth while to be found in the Wolverine State. Then showings were found near Ashley, in Gratiot County, 50 miles southwest of Saginaw. Next came the nice strike in the Muskegon Field, in the extreme western part of the State, where two excellent producers were found out of three tests. Many operators and contractors rushed from Saginaw to the new producing region in Muskegon County and were just getting set when the word came of a nice showing of oil in the Pure Oil Co.'s wildcat on the Root or J. B. Rayner farm, Section 18, Greendale Township, in the western edge of Midland County, northwest of Saginaw County and west of Bay City, 9 miles east of Mount Pleasant and 17 miles west of Midland, the county seat of Midland County. This well struck the top of the Dundee sand at 3,500 feet and top of the pay at 3,533 feet and the drill only penetrated the pay sand about a foot or so when the good showing came and in seven hours flowed 16 bbls. It has been doing from 26 to 30 bbls. a day since the pay was struck, making it one of the most important finds for a long while.

It will be remembered that the idea of many of the operators was that when oil was found in the Dundee formation it would eventually show a field of prominence, although it would prove expensive operating on account of the great depth and the requiring of a long string of casing. No deepening or other operations will be undertaken until the new rig is in place, or about 10 days. Several prior shows were found in this well in higher strata, but none of them was considered particularly favorable and the hole was carried on through to the Dundee sand.

Muskegon Field

Activity in the development of the prospective Muskegon Field is being rapidly speeded up with 14 rigs on the ground and at least half a dozen more certain to arrive at Muskegon within the next week or so. Ten drilling wells are under way, the others being rigs under construction. The drilling wells are: Johnson Oil & Refining Co.'s No. 1 Joseph Cihak, Section 3, Muskegon Township; same company's No. 1 Harley Smith, Section 4; Dixie Oil Co.'s No. 1 Charles Reeths, Section 9; Muskegon Oil Corp.'s No. 1 Albert Heinz, Section 4; J. B. Reed Syndicate's No. 1 George W. Shoup, Section 8; Bowers & O'Keefe's No. 1 C. W. Smith, Section 3; Citizens Petroleum Co.'s No. 1 Becker Brothers' Section 4; Lima Oil Corp.'s No. 1 Margaret Figge, Section 9, and Wolverine Development Co.'s No. 1 Marquardt, in North Muskegon.

Fifty-two companies, individuals and real estate concerns have filed leases on lands in Muskegon County since the first lease was filed by the Muskegon Oil Corp., according to the maps prepared by three members of the county highway engineering department.

Oil showings were found many years ago in the town of Muskegon. Oil standing in the old well on the Mason property back of the plumbing shop of George D. McCullom has been tested and found to be 36.2 gravity, or slightly higher than the product of the two wells of the Muskegon Oil Corp., on the north side of the Muskegon River. Mr. McCullom, who recently uncovered the old well back of his place of business, is now making plans to clean it out and put it to pumping. Unless gas pressure not now existent in the well is created by cleaning it out, the oil will have to be pumped.

A number of capitalists in Grand Haven, in Ottawa County, are incorporating a company to drill for oil in the county, which lies south of Muskegon County. Among those interested are: William Slayter, H. A. Brink, S. P. Sherwood, Samuel Fall, William Connelley, Frank Scholton, J. F. Johnston and H. F. Harbeck. Leases have been obtained in Robinson, Grand Haven, Crockery and Spring Lake Townships, of Ottawa County.

Changing of some of the pipes and tanks from the two producing wells of the Muskegon Oil Corp. made it impossible to obtain an accurate production record. The well on the Figge property is said to flow 150 bbls. at last report and No. 1 on the Reeths property 60 bbls., and both wells are showing remarkable staying qualities, the oil being found in the Travers sand.

Berea Sand Showing

At a depth of 1,215 feet, the Citizens Petroleum Co. found a showing of oil in its test on Becker Brothers farm, and the Muskegon Field may yet prove a commercial producer from that well-known sand, which supplies most of the production in the Saginaw Field. A nice gas showing was encountered at 600 feet in the Becker Brothers well, which shows a dip of 15 feet when compared with the Figge well of the Muskegon Oil Corp., of which the Citizens Petroleum Co. is a subsidiary.

A contract has been made by the Muskegon Oil Corp. with V. M. Vorhees, operator and contractor, for the drilling of six wells in the Muskegon Field. He expects to be building his fourth rig in the prospective Muskegon Field on the Dow property within a few days. Mr. Vorhees is drilling a well for the Maire-Caswell people, who operate in the Muskegon Field under the name of the Lima Oil Corp. of Lima Ohio. The Maire Brothers are old-time operators in the Lima Field of northwestern Ohio and other fields.

A. J. Doblinger, Cleveland, Ohio, is starting a rig on the George Richardson 40 acres, Section 35, Dalton Township, Muskegon County, and close to 2 miles northeast of the present producing wells, and will be a good test for the nearby territory.

J. B. Reed and L. L. Linton, of Saginaw, have secured a community lease for oil and gas on an aggregate of 38 acres in the Reedsville Plat of North Muskegon. The lease provides for the drilling of one well for every five acres of the property if the first and each succeeding well comes in and is producing at least 30 bbls. every 24 hours 30 days after having been drilled in. Property owners are to share in the profits of each and all of the wells in the proportion of their holdings to the aggregate tract. Property owners are: A. B. Curtis, Mauritz E. Peterson. John Jodersma and Arthur Opples.

The first accident in the new Muskegon Field happened at the Johnson Oil & Refining Co.'s well on the Cihak property. Cecil Collette, of Saginaw, member of a drilling crew, is in a critical condition at the Hackley Hospital with a fractured skull.

A Chicago syndicate headed by Horton E. Olson, brother of Judge Harry Olson, chief justice of the Chicago Municipal Court, through T. H. Leafstrabd, realtor of Muskegon, purchased a 40-acre tract of land known as the Dalton property, Section 36, Dalton Township, Muskegon County, and in the northeast quarter of the section. No announcement has been made when drilling operations will be started. Mr. Olson was represented by Nathan Shefner, a Chicago attorney. It is reported this syndicate has also purchased some property in Cedar Creek Township.

It is reported that the wildcat to be drilled in Section 14, Dalton Township, will be drilled by an Ohio company, represented in this field by M. M. Limber, who has gone to Lima, Ohio, to ship a drilling outfit to the field. The rig will be built on the Charles Barr property, in the northeast quarter of the section. This will be the first well south of the Muskegon River since the Muskegon Oil Corp.'s Hazelkamp No. 1 came in a failure.

Incorporation papers for the Joliet-Morris Development Co. were filed recently at the office of the county clerk in Muskegon County. Officers, who are residents of Joliet or Morris, Ill., are as follows: President, Oscar Weindrow, vice president, H. B. Smith; secretary, R. D. Richards; treasurer, E. C. Shields. The officials, along with Fred R. Adams and Charles E. Myler, constitute the board of directors.

Dwight G. Davis, formerly a resident of Montague, Mich., but now a timber and oil operator in Louisiana, is forming a new corporation to be composed of men in Muskegon, residents of Chicago, Pittsburgh and other cities, for the drilling of a number of wells in Muskegon County. Five wells will be drilled, one in Section 5, Muskegon Township, and one each in Section 33 and 34, Dalton Township, directly north of the producing wells of the Muskegon Oil Corp. Two other locations will be staked later. For this drilling a string of rotary tools will be brought to the field from Louisiana.

Town-Lot Drilling

Although the probablities of drilling for oil on city lots has not yet developed in Muskegon proper, the North Muskegon City Council will soon face the proposition whether drilling will be permitted in residential sections. The council already has granted permission to R. L. Hill, Glen M. Porter and others included in a local syndicate to drill beside the Old Marquardt Mill at the end of the North Muskegon bridge road. This, however, would be classed as industrial property and is not considered in the same light as residential property.

F. H. Jerome, secretary and treasurer of a building and loan association at Saginaw, in writing of the problem of city lot drilling says that " the development of an oil field is purely industrial and if drilled in all industrial property would have no injurous effect to residential property" in this or any other city. He points out that a zoning ordinance designating industrial, commercial and residential property should protect the residents of the city against drilling on residential property. Whether the Muskegon zoning ordinance will be sufficiently strong to accomplish this or not has not been determined by the City Commission or by the city attorney.

"Other restrictive and prohibitive ordi-

(Continued on Page 127)

GOOD GAS WELL IN UNION COUNTY, KENTUCKY, MAY INDICATE OIL POOL

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., Mar 10.—Word comes from Union County, west of Daviess and Henderson Counties, that a big gas well has been brought in near Spring Grove, 4½ miles west of Morganfield, the county seat of Union County. The well is said to show a volume of 1,500,000 feet from a depth of 620 feet. Operators are of the opinion that the gas is a good indication of there being a rich oil field close to where the gasser was found, although the gas will be cased off and the well drilled deeper for an oil-producing sand. The supposition is that the territory in Union County will develop a sand known in Illinois as the McCloskey sand, which resembles much the Gordon sand of the eastern fields, although it may require drilling to a much greater depth. Some years ago, in a well drilled in the county below the 2,000-foot depth, a fair showing was reported encountered in the McCloskey sand by drillers that had drilled many McCloskey sand wells in Dennison and other townships, in Lawrence County, Illinois. The McCloskey sand is a local Illinois name for the formation, as a big gusher was found on the McCloskey farm, and hence the name McCloskey was given the sand, which has a thickness of only a few feet, but is very rich. The drilling deeper of the gas well will attract much attention, and will be closely watched by the trade in general. Already a large amount of lease work has been done in both Union and Henderson Counties.

Completions were few during the week, as only three counties were numbered in the completed well list, all in the western division, as quietude prevails in all areas of the eastern area of the State. The best well reported was No. 11 on the Cora Wells farm, in the Ambrose Pool, in Ohio County, with an initial of 125 bbls.; and No. 4 on the Jane Daniels farm, in the southeastern extension of the same pool, showed an initial of close around 100 bbls.

Week's Work

A summary of the week's work in the Kentucky fields show 22 completions, 15 producers with an initial production of 840 bbls., and 7 dry holes. Compared with the previous week, there were 11 more completions, 8 more producers, 224 bbls. more new production, and 3 more dry holes. The wells were distributed by counties and districts as follows:

County—	Comp.	Oil wells	Prod.	Dry	Gas
Ohio	18	13	705	5	0
Daviess	3	2	135	1	0
Allen	1	0	0	1	0
Total	22	15	840	7	0
Last week	11	7	596	4	0
Difference	11	8	244	3	0

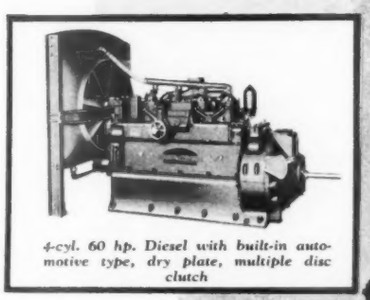
Ohio County Wells

The Mecca Oil Co.'s No. 11 on the Cora Wells 130 acres, in the western part of the Ambrose Pool, and north of Union Grove Church, in Ohio County, is credited with an initial production of 125 bbls., with No. 12 under way.

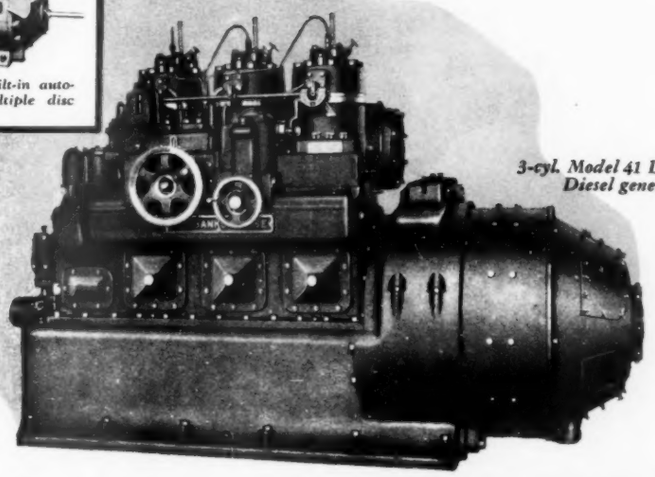
James C. Ellis and others' No. 4 on the Jane Daniels farm, east of Mount Moriah Church, and in the eastern portion of the Ambrose Pool, is credited with 100 bbls. initial production. No. 5, same farm, is reported showing for a dry hole.

Creek Drilling Co.'s No. 8 on the

(Continued on Page 127)

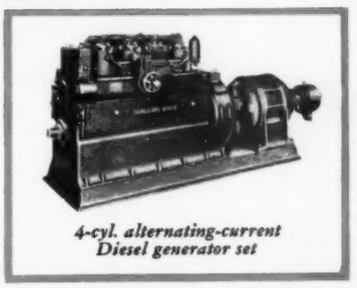


4-cyl. 60 hp. Diesel with built-in automotive type, dry plate, multiple disc clutch



3-cyl. Model 41 Direct-current Diesel generator set

A high speed, light weight Diesel *with* F-M *two-cycle simplicity*



4-cyl. alternating-current Diesel generator set

Here is the type of Diesel that the oil field has been looking for—an engine embodying the simple, dependable two-cycle principle as perfected by Fairbanks-Morse, but lighter in weight, higher speed, and more compact and self-contained than the ordinary stationary Diesel.

It is an engine that measures up to all of the requirements of a general purpose Diesel for oil field work. Construction is exceptionally rigid. Vibration is minimized. Units may be mounted on a perfectly flat foundation of steel or concrete and are equipped with built-in auxiliaries such as compressor for starting air, cooling pump, and when desired, a built-in automotive-type clutch.

As a result, the engine is specifically adapted to driving generators, pumps, etc., either by direct-connection, clutch or belt.

This series of engines is also available in electric generator sets, both alternating and direct-current—compact "Unit-Built" power plants, adaptable to portable mounting and ideal for supplying current to motor-driven tools or auxiliaries.

The entire series of these higher speed, lighter weight engines has all of the basic advantages of the F-M two-cycle principle with airless-fuel-injection: inherent simplicity, remarkable ease of operation, low fuel cost, lowest maintenance cost, complete absence of exhaust and fuel valves and valve trouble, quicker response to load changes, smoother flow of power.

The engines described here are built in sizes of 30, 45, 60, 90, 120 and 180 hp. Diesel generator sets are built in sizes of 20, 30, 40, 60, 80, and 120 kw.

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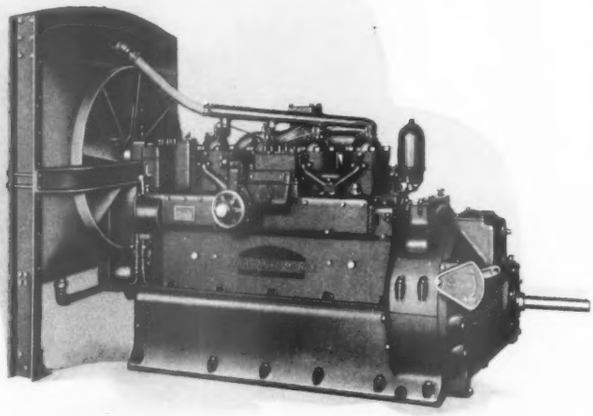

This mobile F-M *unit furnishes economical power for remote operations*

In taking the Diesel out of its original use as a stationary prime mover and adapting it to use on mobile equipment, Fairbanks-Morse pioneered in the cost-cutting march of Diesel application. Proof again of this leadership is found in the new F-M radiator-cooled Diesel unit for a mobile generating plant or for belted power.

The design and characteristics demanded by such service are incorporated in this Diesel: cylinders are cast in block, increasing rigidity; weight is as low as consistent with F-M sturdiness; the multi-cylinder design, together with perfect balance, minimizes vibration.

All auxiliaries including automotive type clutch air compressor for starting duty, cooling-water circulating pump and exhaust manifold, can be furnished "built-in," making a compact unit power plant with no separate auxiliaries.

And these features are, of course, merely added to the trouble-eliminating simplicity of the two-cycle, airless-injection principle that is behind the remarkable service record of 1,400,000 F-M Diesel horsepower in daily operation today.

Investigate the exceptional economy and operating advantages the F-M Diesel offers you. Write for descriptive bulletins.

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FAIRBANKS-MORSE

DIESEL ENGINES

AOA02.11

Few Completions in Southeast Ohio

Drilling Deeper of West Virginia Wells That Are No Longer Profitable Is Feature of Work There. Old Well Increased

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Mar. 12.—Aside from a very few fair completions in the southeast Ohio fields there was nothing out of the ordinary in the Eastern fields during the week. For a number of months the deep sand territory in southeast Ohio has been furnishing all of the good wells. Now and again an old well is shot and its production increased temporarily. This is illustrated by the Consumers Oil & Gas Co.'s No. 3 on the James Rutan farm, in Greene County, shot two weeks ago, and its production increased to 150 bbls. a day. It is still holding up at 70 bbls. a day.

Drilling deeper some of the old wells no longer profitable as producers is still a feature in West Virginia. At the present time few wells are abandoned until after they have been drilled through all sands and found to be dry.

Southeast Ohio

In the deep sand territory in southeast Ohio, in the southwest quarter of Section 2, Pike Township, Coshocton County, the Leonard Oil & Gas Co. completed and shot in the Clinton sand a second test on the W. D. Powers farm. It produced 165 bbls. the first 24 hours. The total depth of the well is 3,144 feet.

In the northeast quarter of Section 24, Guernsey County, the David Brothers Co. drilled its No. 4 on the Paul Micha farm into the Niagara lime pay and produced 35 bbls. the first 24 hours.

In the southeast quarter of Section 19, Sutton Township, Meigs County, the Preston Oil Co.'s test on the Jasper F. Dividen farm is a 3-bbl. pumper in the Berea grit. In the same township, Section 26, the Dailey Oil Co.'s No. 3 on the Giles Hysell farm is a gasser good for 600,000 feet and showing a little oil in the Berea grit.

Near Canaanville, Section 30, Canaan Township, Athens County, the Bowman Oil & Gas Co. has a light gasser in the Berea grit at a test on the Frank Dowler farm. In the Fisher Pool, Section 17, Alexander Township, same county, J. A. Ronhausen & Co. have a very light gasser in the Maxon sand at No. 10 on the J. W. Wood farm.

Noble County

In the southwest quarter of Section 35, Olive Township, Noble County, the Permian Oil & Gas Co.'s test on the Clyde Merry farm is a light gasser in the Berea grit.

In Section 1, Lawrence Township, Washington County, Bowersock and others have completed a test on the Phillip Bowersock farm. It is a light pumper, about 3 bbls. a day, in the Mitchell sand.

In Orange Township, in the southwest quarter of Section 30, Carroll County, the Leesville Oil & Gas Co. has a duster in the Berea grit at a second test on the B. J. Tripp farm. In Franklin Township, Monroe County, Shay & McCmukkin's No. 3 on the P. S. Stoffle farm is a light pumper in the Berea grit. In Section 21, Harrison Township, Perry County, the Pure Oil Co.'s No. 3 on the A. Y. Tague heirs' farm is a duster and has been abandoned.

In Section 17, Bedford Township, Meigs County, Frank Gaul and others have started to drill a test on the Herbert Biggs farm. In the northwest quarter of Section 26, the Ohio Fuel Supply Co. is drilling a test on the D. A. Dais farm.

In Section 2, Franklin Township, Licking County, Moore & Adams have completed in the Berea grit a second test on the Ina Ryan farm. It is a light gasser.

In Lot 14, Licking Township, Licking County, Ohio, the A. H. Heisey Co. is drilling a test on the James Daviess farm. In Lot 17, Madison Township, same county, the Hope Construction & Refining Co. is drilling a test on the W. E. McInturf farm, adjoining the Aaron D. Fetty farm on the north.

West Virginia

The West Virginia Field had a number of completions, but none better than light pumpers. These fields continue to furnish more gassers and dry holes than oil producers. The new work under way is widely distributed throughout well-defined territory.

Light wells were very much in evidence at the close of the week. In McClellen district, Doddridge County, West Virginia, the McIntyre Brothers Oil Co. completed a light gasser on the James Baker farm.

In Geary district, Roane County, the King Oil & Gas Co.'s No. 3 on the John T. Boothe farm is a gasser in the Big Injun sand. In Williams district, Wood County, located on Plum Run, O. E. Grow's No. 13 on the McAtee farm is good for 6 bbls. a day in the first Cow Run sand.

In DeKalb district, Gilmer County, the Hope Natural Gas Co. drilled deeper into the Big Injun sand a test on the Ira G. Ellyson farm was a gasser. In the same district, the Valley Gas Co.'s No. 4 on the Albert E. Bailey farm is a gasser in the Big Injun sand.

W. S. Dailey & Co.'s second test on the Charles Anderson farm is a gasser in the Big Injun sand. In Sheridan district, Martin Crowley has a gasser in the same formation at No. 1 on the Cooper Brothers' farm. In Lee district, Kingsbury & Dollman have a duster at a second test on the L. L. Lynch farm. In Center district, the Hope Natural Gas Co.'s test on the Allen Hardman farm is a gasser in the salt sand.

Starting Tests

On Yellow Creek, Sheridan district, Calhoun County, the Chemical Oil & Gas Co. has the rig completed for a test on the A. T. Yoke farm. In Meade district, Tyler County, the American Oil Co. is drilling on the Henry Fish farm. In Murphy district, Ritchie County, Hardman & Co. are rigging up on the J. Wolf farm. In the same district, the Maxon Oil Co. is rigging up on the Eli M. Parks farm. In Curry district, Putnam County, L. R. Sweetland & Co. have started to drill on the Catherine Zirkle farm.

On Daniels Run, Lee district, Calhoun County, the Calhoun Oil & Gas Co. completed in the Big Injun sand a test on the A. J. Nitz farm, good for 500,000 feet. Rigs for the following tests in Sherman and Lee districts have been completed: W. H. Bickel, on the Nathan Bennett farm; Hope Natural Gas Co., on the C. D. Stalnaker farm and Don Altizer farm. In McKim district, Pleasants County, the Poynter Oil & Gas Co. is drilling a test on the D. Poynter farm.

In Church district, Wetzel County, the Manufacturers Light & Heat Co. has a gasser in the Big Injun sand at a test on the John Antil farm. In New Milton district, Doddridge County, George Ahouse has a duster at a test on the Seven-Day Baptist parsonage lot. In Union district, Ritchie County, the Carnegie Natural Gas Co.'s test on the Prather heirs' farm is a duster in the Big Injun sand. In the same district, R. Elder & Co.'s test on the Roy Wade farm is good for 15 bbls. a day.

On the Kanawha River, near the mouth of Bee Run, Lee district Calhoun County, the Hope Construction & Refining Co. has completed in the Big Injun sand a test on the A. Hardman farm. It is a gasser good for 1,500,000 feet.

In Spring Creek district, Wirt County, the Dailey Oil Co. has a duster in the Big Injun sand at a test on the S. E. Duagett farm. In Grant district, Pleasants County, George Pickes & Co. have a 5-bbl. pumper in the Cow Run sand at a test on the Kester heirs' farm. In Jefferson district, the Sharp Farm Oil Co. has a light pumper at a second test on the George Sharp farm.

Roane County

In Geary district, Roane County, the Pet Oil & Gas Co. is fishing at 1,270 feet on the Bertha Canterbury farm. In Union district, Lincoln County, Pridemore & Adkins have a gasser in the Berea grit at a test on the E. G. Stone farm. In Sherman district Boone County, the Pure Oil Co.'s test on the L. O. Ferrell farm and No. 4 on the Nelson Land & Oil Co.'s tract are both gassers. In Crook district, the Boone Oil & Gas Co. has a gasser on the W. F. Mooney farm. In Sherman district, the Columbia Carbon Co. has a gasser at No. 3 on the A. C. Canterbury farm.

In Barboursville district, Cabell County, the Aetna Oil & Gas Co.'s test on the J. M. Lewis farm is a duster in the Big Injun sand. In McComas district, the West Virginia Gas Corp.'s test on the Irvin Morrison farm is a gasser in the brown shale. The same company's test on the G. W. Simpson farm is a gasser in the same formation.

On Trace branch of Breeden Creek, Henry district, Mingo County, the Public Gas Corp. has drilled No. 20 on the Henry Costerman estate into the Maxon sand and good for 15 bbls. a day. The location is 600 feet southwest of No. 17 on the same lease. The rig for No. 21 on the same property has been completed. In the same district, the Old Colony Oil Co. is fishing at 1,800 feet on the Thomas Caldwell farm.

Lewis County

In Freemans Creek district, Lewis County, Moran Brothers have a very light pumper in the Fifth sand at a test on the L. D. Anderson farm. In the same district, the Hope Natural Gas Co.'s test on the I. P. Simmons farm is a very light pumper in the fifth sand. It will not be good for more than 1 or 2 bbls. a day.

In Grant district, Ritchie County, L. N. Rinehart & Co. are testing for oil in the Big Injun sand on the H. L. Smith farm. In Murphy district, Park Bowser has a gasser in the Big Injun sand at No. 3 on the J. W. Grimm farm. In Duval district, Lincoln County, the United Fuel Gas Co. has a gasser in the

(Continued on Page 131)

JEROMESVILLE, ASHLAND COUNTY, O., HAS PROMISING OIL DEVELOPMENT

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Mar. 12.—The only oil producer reported from any part of the Central West Field during the week was in the Lima Field. In Central Ohio 13 wells were completed, 8 being dry holes and 5 gas wells, while none was reported from Indiana or Illinois. One wildcat well was the feature of the week in Midland County, Michigan, which adjoins Saginaw County on the northwest, drilling by the Pure Oil Co. at about a foot in the deep Dundee sand and reported flowing from 26 to 30 bbls. daily, but not drilled in the sand enough to give the hole a thorough test. The top of the Dundee was found at 3,500 feet, and at 33 feet in the pay was found, but the owners will put up a standard rig and drill it deeper in hopes of making a big producer from it. No new completions are reported from the Muskegon Field, in the western portion of Michigan, but development work is getting more brisk, and with better weather will show great activity.

Weather conditions in western Indiana and eastern Illinois have been quite severe, with heavy snow and high winds banking the snow to a depth so many places are impossible to get over.

In the Lima Field of northwestern Ohio, near Elmore, in Harris Township, Ottawa County, Gust Magsig & Son's No. 16 well, 100 feet from the south line and 200 feet from the west line of the Charles F. Magsig farm, in the SE of Section 23, pumped 5 bbls. Top of Trenton at 1,252 feet, and was drilled 34 feet in the sand.

Central Ohio

One of the latest and most important developments for oil in the Central Ohio Field at this time is being made near the village of Jeromesville, in Ashland County, that gives promise of being a close rival of the famous Lodi Berea Sand Field of some years ago. The top of the Berea sand is found at from 600 to 650 feet, and the Berea sand has a large amount of pay sand, which is evidenced by a well drilled on the McFadden farm, which showed 102 feet, with others running 50 to 60 feet, and a nice volume of gas is found with the oil, which together with the deep thickness of the sand assures a long production. Very little salt water is found, usually running less than 5 per cent. The drilling costs are low, and only a small amount of casing is needed; No. 1, now drilling on the Austin farm, requiring only 8 feet and 8 inches of drive pipe and 210 feet of 6-inch casing. The oil is about 37 gravity, selling as Wooster grade; and the oil is reported taken by the Illinois Pipe Line Co. from the new field.

Robinson Brothers, of Westerville, Ohio, completed Nos. 1 and 2 on the William Hare 86 acres, Section 4, Mohican Township, Ashland County, reported good for 15 and 20 bbls., respectively. No. 3, same farm, is drilling; and No. 4 is being started. Same firm's Nos. 1 and 2 McFadden 20 acres, same section, good for 30 and 20 bbls., making, so far, four producers for the new field. Robinson Brothers are also drilling No. 1 on the Alma Austin farm, Section 9, same township. VanTilburg and others of Ashland have made location for No. 1 on the George W. Black, Section 33, Mohican Township. Grimm and others of Lodi, Ohio, expect to commence soon the drilling of a well on the Sealer farm, north of the Hare wells, in Section 33, Perry Township. Pittsburgh, West Virginia and Ohio parties have made a number

(Continued on Page 127)

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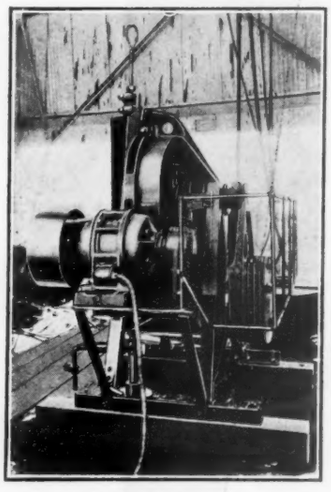
EQUIPMENT AND SUPPLIES

FIELD OF USEFULNESS OF JACK IS EXTENDED

The Simplex pumping jack, now manufactured by the Emsco Derrick & Equipment Co., has become a recognized part of oil field equipment. Designed primarily to allow the operation of isolated wells where no central power hookup was available, its field of usefulness has not been limited to this alone, but is being broadened every day. The Simplex jack is not only easily installed, but may



Simplex Pumping Jack.

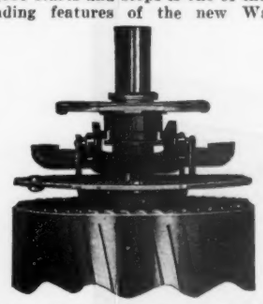
be operated either with gas, steam or by an electric motor, as may be determined by existing conditions.

The jack mechanism involves a recognized engineering principle—of mounting all parts to a central casting. This central or frame casting is of electric steel, with plates for receiving component parts and the resultant solidarity of appearance is impressive. In spite of the apparent compactness of this pumping unit, each part is easily accessible for inspection and lubrication. The equilibrium of the jack is such that parts may be removed at any time, without in the least affecting its over-all balance.

It is not necessary to have a special foundation on which to mount the jack, derrick floors having sills and posts in good condition being satisfactory. Installation is accomplished simply by skidding the jack into position over the hole and then bolting it in place.

SPLIT PHASE MOTOR HAS SEVERAL FEATURES

A new switch, stated to be capable of 500,000 starts and stops is one of the outstanding features of the new Wagner

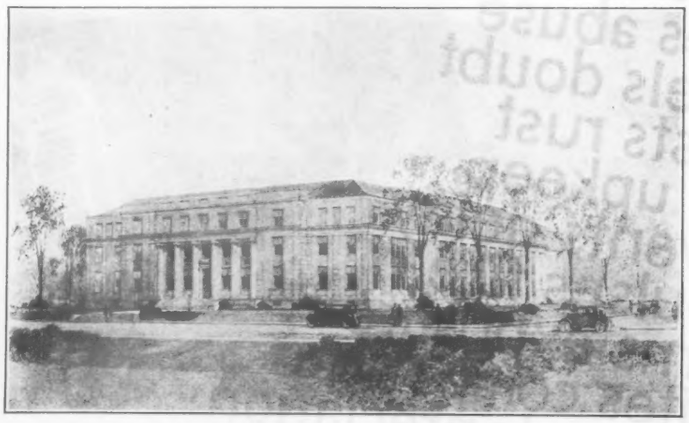


58RB split-phase motor. In fact, one motor is reported to have started and stopped almost a million times, and even after undergoing that ordeal the switch still stood up and operated without a sign of breakdown.

The switch is described as so constructed that it breaks contact instantaneously without dragging, multiplies the contact surface, never lengthens its time beyond that proper for the motor, gives wiping contact without rubbing and undue wear, will not rust, stick or bind and the entire switch consists of a few simple parts with nothing to get out of adjustment.

In addition to this improved switch, the Wagner 58RB motor is said to embody an improved method of oiling, a heavy formed steel base which cannot be broken, drip-proof endplates, a spacious terminal easy to get at and well insulated to prevent grounding. The motor is fully described in the Wagner Bulletin No. 153, a copy of which will be sent anyone writing direct to the Wagner Electric Corp., 6400 Plymouth Avenue, St. Louis, Mo.

INSTITUTE FOR METALLURGICAL RESEARCH



Plans for the buildings of the Battelle Memorial Institute of Columbus, Ohio, have been completed and construction work will begin this spring, according to Harry M. Runkle, president of the International Derrick & Equipment Co., who is treasurer and one of the trustees of the Battelle Foundation.

This Battelle Memorial Institute has been planned as a center for scientific research in industrial metallurgy and in problems dealing with the mining and petroleum industries. Its efforts will be devoted toward the development of new methods, materials and processes through the application of scientific methods to industry. The value of such an institution to the producing and refining divisions of the oil industry cannot be underestimated.

Dr. Gerald Wendt, who has been selected as director of the new institute, is widely known throughout the oil industry. He was formerly director of research for the Standard Oil Co. of Indiana and is at present dean of the school of chemistry and physics at Pennsylvania State College.

Heavily endowed by the estates of the late Col. John Gordon Battelle, his wife, and his son, Gordon Battelle, the institute is to be composed of two buildings with a frontage of 300 feet facing the campus of Ohio State University at Columbus. It will cost in excess of half a million dollars.

According to present plans, it is believed that the institution will begin operations in the fall of 1928.

While the main object of the institute will be industrial research under the fellowship system, similar to that at the Mellon Institute at Pittsburgh, the income from the funds of the Institute itself will be devoted to long-distance research for the benefit of American industry.

Col. John Gordon Battelle was a leader in the iron, steel and coal industries. Gordon Battelle, whose death in 1924 made the estate available, was also prominent in the steel and nonferrous metal industries. He, with Harry M. Runkle, organized the International Derrick & Equipment Co., and served as its president until his death.

The board of trustees appointed in accordance with the terms of the will included the late President Harding. The present board is composed of Harry M. Runkle, Joseph H. Frantz, Earle C. Derby and Gerald B. Fenton, all of Columbus; Bishop John W. Hamilton of Washington, D. C., president emeritus of the American University, and J. Clare Miller of Ashland, Ky.

ADDITIONS TO PERSONNEL

R. C. Bastress, formerly with the Fort Wayne Iron Store Co., has joined the Black & Decker organization to handle Indiana and part of Michigan. L. W. Beuhausen, formerly with Slocum and Kilburn, has been employed to handle Black & Decker products through western Massachusetts. G. N. McCarthy will represent Black & Decker in Buffalo territory, taking the place of H. B. Austin who has been transferred to the Chicago district.

VOLZ REORGANIZATION

The Volz Engineering Equipment Co. has been purchased and succeeded by the Volz Engineering Corp., incorporated in California. In addition to the Volz steam saving specialties, it will market three new products, the Volz nonpulsating valve motion for duplex pumps, Volz universal steam trap and the Volz Little Giant gas and oil burner

HALL IS ADVERTISING MANAGER

Harry N. Hall has been appointed advertising and sales promotion manager of the Stockham Pipe & Fitting Co., Birmingham, Ala. Mr. Hall has been in the agency field heretofore.

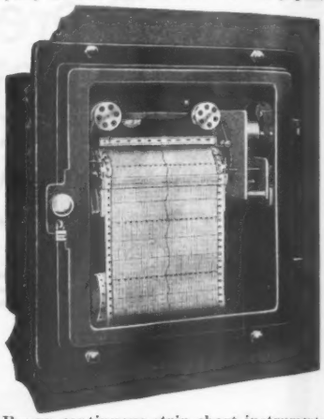
PACIFIC COAST DISTRIBUTOR

E. O. Johnstone, district sales manager for the American Chain Co., Inc., at 425 Second Street, San Francisco, Calif., has been appointed Pacific Coast distributor of Ford chain hoists to the industrial trade.

NEW FLUSH TYPE CASES FOR CHART RECORDERS

Where appearance is a feature, added attractiveness to instrument installations can be obtained by having the instruments supplied with special cases for flush mountings on switchboard or panels, the switchboard or panel being pierced to receive instrument cases.

The Brown Instrument Co. has long supplied its pressure gauges, thermometers and more lately its flow meters in flush-type circular cases. Now the company is also able to furnish the popular



Brown continuous strip chart instruments in cases of the flush type.

A simple but important feature of the new Brown flush-type continuous chart recorder is an arrangement by which the recording mechanism can be drawn out of the case at the front for easy inspection, after which it can be pushed back into place, a locking device holding it firmly in position. Brown continuous strip chart recording pyrometers, CO_2 meters, tachometers and resistance thermometers, it is announced, can now be furnished in flush-type cases with or without panels as specified.

SALES OFFICE OPENED FOR SOUTHERN TEXAS

The Wagner Electric Corp. announces the opening of a sales office at Houston, Tex., 1006 Washington Avenue. Warehouse stocks are carried at both Houston and San Antonio.

W. B. Arbuckle has been placed in charge and will look after the corporation's business in South Texas, Beaumont, Houston, San Antonio and south to the Rio Grande.

Mr. Arbuckle has had a wide experience in his 12 years' connection with the corporation. He has worked in several departments, namely, production, ignition test, research, engineering, all in the factory. Later he operated the Omaha Service Station, and then until this last transfer to the sales department, he managed the Kansas City Service Station.

JOINS YOUNG ENGINE CORP.

J. W. Lowes, formerly of the sales department of the Joseph Reed Gas Engine Co., Oil City, Pa., has again entered the oil and gas field and will be connected with the sales department of the Young Engine Corp., Canton, Ohio, manufacturers of the Young drilling engine.

HERCULES MOVES OFFICE

Hercules Tool Co., of Tulsa, Okla., announces the removal of its offices from the Bliss Building, to Suite 812, Palace Building.

Attentionless Electric Motors

Once installed, Timken-equipped motors become permanent, attentionless units in your plant. You could forget them, aside from a little lubrication once every few months. Thousands of Timken-equipped motors have given years of such service—many of them on jobs where bearing life was previously limited to months.

Timken Bearings constantly maintain the original gap, without constant attention. Rubbing, burn-outs and shut-downs for motor trouble are eliminated. Dripping becomes a thing of the past. Endurance, dependability, economy, exceed anything ever known.

In respect to bearings any Timken-equipped motor is ready for any conditions! Floor, wall or ceiling mountings make no difference. Type of drive makes no difference. *For load direction makes no difference.* All combinations of radial and thrust loads are equally well provided for by the Timken taper principle.

So much more than merely anti-friction bearings, Timkens are improving motor operating and cost records, just as they are doing in every type of equipment throughout Industry. Savings are so great in many cases that it pays to write off obsolescent motors immediately, installing modern Timken-equipped types. Leading motor manufacturers can supply you.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

Timkens are more than anti-friction bearings because they have the extreme all-around capacity made possible only by Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken electric steel.

SINGLE ROW TIMKEN BEARING

DOUBLE ROW SELF-CONTAINED TIMKEN BEARING

TIMKEN
Tapered
ROLLER BEARINGS

MEN KNOWN IN OILDOM

Harry H. Rogers

Harry H. Rogers who last week was elected president of the Exchange National Bank of Tulsa, is unusually well known in the Mid-Continent Field, and has been continuously identified with the oil industry for 20 years. Mr. Rogers was chosen president by the board of the Exchange bank when it met to elect a successor to the late James J. McGraw.

Harry H. Rogers was born in Missouri 51 years ago. He had a common school education after which he taught school while preparing himself for a legal career. After having been admitted to the bar he moved to the Indian Territory and later became a member of the firm of Rogers & Crump in Wewoka. Mr. Rogers made an exhaustive study of the legal phase of Indian lands and leases and when the development of Oklahoma as an oil state began he made himself familiar with the law on oil and gas to such a degree that he became known as an authority, especially in so far as it related to Indian lands. He was made legal counsel for McFarlin & Chapman of Wewoka, former rachmen who became oil operators. The firm organized the McMan Oil Company with Mr. Rogers as general counsel and a member of the board of directors.

The McMan Oil Company was one of the largest producers of oil in the Cushing and Healdton Fields in Oklahoma in the boom days of those fields and also in Augusta, Kans. The company sold all its production to the Magnolia Petroleum Company in 1916 for a price reported to have been $36,000,000. Mr. Rogers was made a multi-millionaire through this transaction.

The McMan Oil Company retained its corporate entity and built up another production in Oklahoma and Texas which gives it rank among the largest purely producing companies in the Mid-Continent division, and Mr. Rogers remained an important part of the organization.

Mr. Rogers has been associated with the Exchange National Bank 10 years as a member of the board of directors. He moved to San Antonio in 1920 in order that Mrs. Rogers' health might be benefited. In that city he became a civic and industrial leader.

Harry H. Rogers is widely and favorably known in the Southwest as a financer and man of public spirit and his election to the presidency of the largest bank in Oklahoma was no surprise after the notable record he has made in business.

PERSONAL PARAGRAPHS

W. M. Lawrence, of the Peoples Gas & Fuel Company, Inc., has been transferred from Ferriday, La., to Vivian, La.

Dwight M. Beard, oil operator, has removed from Kingman, Kans., to Wichita, Kans.

* * *

J. E. Walsh, independent operator, is back in San Antonio, Tex., from one of his periodic trips to New York City.

* * *

R. C. Grinnell, of the Fluid Packed Pump Company, has returned to Tulsa from a trip to the factory at Los Neitos, Calif.

* * *

A. S. Hardin, president of the Southern Crude Oil Purchasing Company, Shreveport, La., is in New York, on company business.

* * *

O. P. Miller, of the Phillips Petroleum Company, is now in Shidler, Okla., (the Burbank Field) after a period of service at Borger, Tex.

* * *

George Gammil, of the Amerada Petroleum Corporation's Shreveport, La., office, is spending two or three weeks in Hot Springs, Ark.

* * *

Dr. A. Hall has been appointed resident physician for Imperial Oil, Ltd., and its subsidiary companies in the Turner Valley Field of Alberta.

* * *

Hugh Fitzsimmons, of the Fitzsimmons Drilling Company, Shreveport, La., has returned from a business trip to the Venezuelan fields.

* * *

Audrey L. Glines, of the Empire Oil & Refining Company's geological department, has been transferred from Bartlesville, Okla., to Santa Anna, Calif.

* * *

Harry L. Nolan, sales manager of the Continental Supply Company, is recovering from a two weeks' illness which confined him to his home in St. Louis, Mo.

* * *

E. J. Cunningham, Denver, Colo., was a recent visitor in Coleman, Tex., making a tour over producing properties both in Coleman and Brown Counties.

* * *

M. G. Gulley, of the Marland Oil Company, has returned to the company's home office in Ponca City, Okla., following a business trip to Fort Worth, Tex.

* * *

C. A. Russell, director and geologist of the Republic Production Company, has returned to his offices in San Angelo, Tex., following a business trip to Houston, Tex.

* * *

W. H. Gaither, district manager of the National Transit Pump & Machine Company, has returned to his Houston, Tex., office following a business trip into the North Texas area.

* * *

Barry Sullivan, Union Tank & Pipe Company, and headquartered at San Antonio, Tex., has returned to his headquarters following a trip through North and West Texas.

* * *

J. M. McMillan, of the Empire Oil & Refining Company's geological department, has been transferred from Oil Hill, Kans., to the main office at Bartlesville, Okla.

* * *

Edgar B. Davis, president of the United North & South Oil Company, which has two deep tests drilling in Caldwell County, Texas, below 7,000 feet, has been in Luling to look over both tests.

* * *

Myron F. Westover, secretary of the General Electric Company for the past 34 years, retired March 1, and William W. Trench, assistant secretary, has been elected by the board of directors to succeed him.

* * *

J. Crampton Anderson, president of the Pan American Western Petroleum Company, who was confined to his home for several days recently as the result of a serious illness, has shown a considerable improvement.

* * *

B. A. Hardy, vice president of the Moody-Seagraves Companies operating in Caddo and Richland Parishes, Louisiana, was in New Orleans, during the early part of the week on gas business, going from there to Jackson, Miss., where, as president of the Norwela Council of the Boy Scouts of America, he attended a conference of Scout officials.

L. G. Beckelymer, operating out of the Phillips Petroleum Company's Shreveport, La., office, has returned to headquarters after a short trip through the prospective northeastern Mississippi territory.

* * *

John I. Moore has been placed in charge of the office opened by the Fuhrman Petroleum Company in San Angelo, Tex. Mr. Moore recently resigned from the Roxana Petroleum Corporation's geological staff.

* * *

Maj. F. R. Burnham, of the Burnham Exploration Company, is seriously ill at the present time but his vigorous constitution, built up through a long period of military experience and reconnoissance work, is standing him in good stead.

* * *

L. G. Davis, of the Quincy Oil Company, which drilled the first hole in Monroe County, Mississippi, 2½ miles south of the Amory Petroleum Company gasser, is back in Aberdeen from Charleston, W. Va., headquarters to check up the territory.

* * *

Earl Henderson has been appointed scout for the Prairie Oil & Gas Company in Cowley and Sumner Counties and all of Kansas west of the ninety-sixth principal meridian. His headquarters will be in Wichita. He had been in West Texas for the Prairie.

* * *

S. F. Shaw, consulting engineer in air-gas lift operations for the Carter Oil Company, has returned to Tulsa from a trip to Colombia and Peru, where the International Petroleum Corporation has gas lift operations under way.

* * *

Tony Statts, formerly with Carter Oil Company in South America and later with the Parkersburg Rig & Reel Company in South America, will be factory representative for the Fluid Packed Pump Company in South America, with headquarters in Maracaibo, Venezuela.

* * *

F. V. Faulkner, general manager, M. J. McLaughlin, assistant general manager, W. M. Ray, superintendent of the gas department and Chief Geologist Dorsey, of the Magnolia Petroleum Company, of Dallas, Tex., were in Shreveport, La., attending the annual division dinner of the company.

* * *

L. G. Hughes, formerly head of the gas department of The Texas Company at Shreveport, La., and in the production department since it took over the gas department, has been made head of the land department at Shreveport, succeeding W. M. Redditt, resigned.

* * *

E. H. Salrin, of Tulsa, vice president, Tidal Oil Company, is in Monroe County, Mississippi, going over that prospective territory with M. W. Grimm, company geologist recently assigned to northeastern Mississippi territory from the Shreveport, La., office.

* * *

Dr. E. F. Davis, chief geologist of the Shell Company of California, who left Los Angeles several weeks ago for The Hague, sailed from New York during the latter part of February. He will be away from California for about three months and is expected to return to the San Francisco office some time during the latter part of May.

* * *

M. McIntyre, writing from Miri, Sarawak, writes: "We are all well in this part of the world and trying to keep cool while you people at home are burning up the coal to keep warm. Mr. Macalpine left here some time ago, having retired after many years' hard work. He was the first man on the ground and his first well still continues to produce oil. Mac was well liked by everybody, even the natives, and he sure got a great send-off when he left."

* * *

D. G. Dunbar has resigned as head of the land and scouting department and R. F. Imbt has relinquished his position as chief geologist for the Pure Oil Company in West Texas, effective April 1. Both will remain in San Angelo. Their successors are Ford Turner, head of the land and scouting department, who for three years has been with the Pure Oil Company in San Antonio, and M. E. Roberts, district geological head, who was in charge of the Pure Oil Company's geological department in the Panhandle until the Amarillo office was closed a year ago.

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Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

SHOOTING INTO WATER

In reading up on the subject of shooting wells I came across the expression, "shooting into water." I wish you would explain the meaning of this expression to me, for it is not clear to me.—E. F. Y.

When there is water at the base of the oil sand or in a separate sand below, with a thin strip of shale between the two sands, a shot is likely to break the formations to such an extent that water from one or both of these sands can enter the well. This is called "shooting into water," and it presents one of the most familiar sources of trouble in the practice of well shooting in the oil field.

REPLACING A MASTER GATE

How would you go about replacing a master gate on a high pressure gas well if the master gate was leaking? Of course, a leaky connection might be remedied by screwing up on the pipe or by putting some kind of a casing clamp on the pipe and against the gate.—G. F. D.

The safest and most positive way to replace a defective master gate on a high-pressure well would be to build up sufficient back pressure in the well to overcome the gas pressure. The simplest way to accomplish this would be to place a mud lubricator on the well and fill the well with mud. It might be necessary to add baroid or iron oxide to the mud to give it sufficient weight to gain the desired results.

A lubricator consists of one or more joints of casing installed above the master gate. The lubricator should be equipped with a high-pressure gate both top and bottom. The lower gate on the lubricator is closed and the pipe above is filled with mud. The upper gate is then closed and both the lower lubricator gate and the master gate are opened. The mud gradually drops down in the well against the gas pressure. As soon as the lubricator is empty, the lower lubricator gate is closed and the upper one is opened. The lubricator again is filled with mud and the former process is repeated, being certain that the upper gate valve on the lubricator is closed. A pressure gate should be installed on the well head or lubricator to note the effect of the mud on the well pressure. As an added precaution it is suggested that another master gate be on hand and ready for installation as soon as the well has been mudded off as a high-pressure gas well is dangerous at any time.

Master gates are installed on wells that have blown out and where it is impossible to fill the hole with mud either under pressure or with a lubricator, but it is a difficult and highly dangerous job. One method is to build a stub derrick at some distance from the well and then skid it over the well, this of course presuming that there is no derrick over the well. The master gate is then swung in place over the casing and screwed down, the gate of course being open during the operation to permit the gas to blow on through. Other methods have been used to accomplish the same result. Each particular job offers a problem in itself.

REDUCING EMULSION LOSSES

I have a few old wells of small but pretty steady production and I have been figuring up lately, as near as I can, on what I am losing through cut oil. I figure that close to 15 per cent of the production of my wells is wasted as a result of b.s. forming. I think that is pretty serious and I would like to know if there is any way I can at least decrease this loss. I am not making much out of my wells and I have to watch every penny of expense to make them pay at all. The amount of cut oil seems to have grown bigger lately. That is what started me figuring. All my wells are on the beam. I read something in your "Field Problems" page a few months ago about preparations made for dissolving emulsions. I think you recommended them, but I haven't been able to find the question and answer I read. I would appreciate any advice you can give me.—T. B. V.

Emulsions may be put under two general classifications, those formed in the sand and those formed after the oil enters the well. Little can be done to eliminate those formed in the sand unless the water having access to the sand is an extraneous one; for example, an upper water entering some well drilled into the sand through a leaky casing or defective water shut-off, or a bottom water that may be entering the sand in a well that has been drilled too deep. Emulsions formed in the well may be eliminated in part at least by adopting the best pumping practices commensurate with the net increase in earnings. Many of the emulsion troubles are caused by poor pumping practices.

Before attempting to treat all the emulsion now being formed, it would be well to make a survey of your pumping and other field equipment and of your pumping practice. For instance, emulsions often are formed in lead lines when these are too large, especially if an appreciable quantity of gas is being produced. You can understand readily how a surging and heading action may take place if the lines are too large. Agitation of the oil and water results in the formation of emulsion. The emulsification is less under these conditions when the lead lines run downgrade from the wells, as the heading action is eliminated.

Restrictions in the flow line, such as valves, etc., are conducive to the formation of emulsions. When the pump barrels are set below the top of the sand and the wells are pumped off, a condition that makes emulsions almost inevitable is created. Therefore, unless it is absolutely necessary to set the pump barrels down in the sand and pump the wells off this course should not be followed.

Leaking and worn cups, leaky balls and seats, leaky tubing, loose standing valves and too rapid pumping account for much of the emulsion formed in a well. A pumper familiar with conditions in his field can tell as a rule if defective cups or valves are to blame for cut oil. Pumping a well so fast that the barrel is not filled at each stroke, with consequent pounding of the pump, is another frequent source of cut oil.

When making a survey of this kind, the cheapest and most effective way in which to carry it on is to start in with one well and attempt to reduce the emulsion formed in it and after this well has been thoroughly investigated and worked over, proceed to the next, and so on until the entire property has been put in shape. Not all of the emulsion troubles will be eliminated and some emulsion will very likely have to be treated. A few simple tests as to the cheapest and most effective method to use in treating the emulsion should then be carried on with a small quantity of the emulsion. For example, it may happen that the emulsion may be broken down by passing the oil through a hot water wash tank. If this is not efficacious one of the advertised preparations may accomplish the desired result.

MAINTENANCE OF PRESSURE VS. REPRESSURING

I noticed some recent articles on putting gas back in an oil sand while there was still a lot of pressure in the sand. I have been producing oil for a long time, but I have never tried out that way of increasing the oil production. As soon as the wells stop flowing or after they have been pumped a while, I always put them on vacuum. We always thought that it was better to take as much pressure as we could off of the sand. What is your idea about putting gas back in a sand and when should you start putting the gas back? How much more oil can be produced? We have some small plants in the old fields where air is put down in some of the wells and I have been told that the production has been increased. Any information you have on the subject would be of interest to me.—R. B. McW.

The general trend in production practices now seems to be to maintain pressure in a sand as long as possible. From the numerous papers, many of which you undoubtedly have read, it is evident that some very interesting tests are now being conducted and the results obtained in at least some of them would indicate that maintaining pressure on a sand rather than allowing the sand to become depleted of a major portion of its gas, is the correct method to use in order to produce the maximum amount of oil from a sand. One of the difficulties found in repressuring many of the old properties has been the by-passing of gas through the sand. It has also been found that a reconditioned sand irrespective of the extent to which it may be repressured, does not result in a duplication of the original condition. Therefore, it would seem that a maintenance of pressure rather than repressuring would be more beneficial in obtaining a greater ultimate recovery.

As to the time when the introduction of gas should commence, each field and sand offers a separate problem. In general, it might be said that the operation should commence as soon as it is economically possible to do so. Less gas need be pumped back in the sand when the rock pressure is high in order to maintain the pressure, thus the compressor capacity required during the high pressure period, assuming that some decline in the rock pressure takes place, may not be greater than at a later period in the life of the field. As the oil is removed, a greater volume of gas must be introduced to maintain the rock pressure on account of the replacement of oil which is removed from the sand, with gas. Thus if the pressure is maintained at its initial figure, the compressor capacity must be increased.

Another practice which is coming into use is the introduction of so-called wet casinghead gas instead of the dry or residue gas from a gasoline plant as it is believed and logically so, that the untreated gas lowers the viscosity of the oil in the sand to a greater extent than does the dry gas. The adoption of this procedure is suggested in both repressuring and maintenance of pressure.

In order to increase the efficiency resulting from the new cycle of operation, the adoption of the most efficient methods in flowing the wells is urgently recommended. Aside from the fact that a greater ultimate recovery can be expected from such a procedure, such practice will result in lower compression costs, as the decline in rock pressure will be slower, hence less equipment will be required to maintain pressure. The tendency might be to produce the wells wide open in an effort to obtain a larger daily production having in mind that the use of compressors for pumping the gas back in the sand will justify such operations. The necessity for producing the oil with as little formation gas as possible is just as important in the maintenance of pressure as it is under the present general method of production.

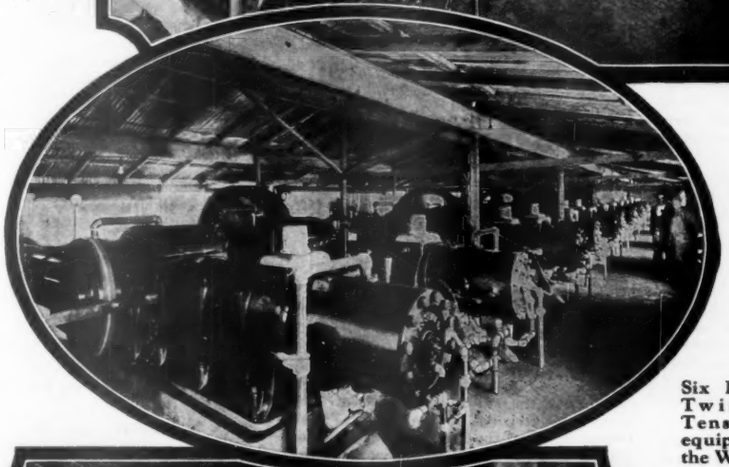
DRAINING FOR PIPE LINE

There are several marshy tracts along the route of a pipe line that our company is going to lay and we contemplate having the surface water drained before burying the pipe. Our primary reason for doing this would be to afford better conditions for the process of ditching and covering, but I am looking ahead a little and wondering if there will not be much less likelihood of rapid deterioration if we do this draining. If this is a good additional reason for draining boggy spots, then we might well do more of this drainage work. What I mean is that even if the marshiness did not present any serious problem for the ditchers in some places, it might be a good plan to drain the area anyway just as a means of reducing the chance of corrosion. If wet conditions are conducive to corrosion, and it seems to me they must be, then surely it would be a good idea to drain every bit of ground that appears even slightly marshy. I would like to have your opinion about this point. —K. J. B.

Draining is likely to be expensive and if it is not necessary, for ditching, to drain an area, it is doubtful if it would be economy to drain it for any possible help this might be in slowing up corrosion, unless the marshy area were permeated with salt water, acid or strongly alkaline.

As a general principle, it would be better to choose dry, well-drained land for a pipe line route rather than wet or marshy ground. Some soils, however, have very little effect on the pipe and pure water, without air to bring the oxygen with it, does less harm than exposure to air which is often damp as is the case almost everywhere. Therefore, if it is not very costly to drain an area it might be wise to do so do, but it must be remembered that damp earth, which probably had air carried into it, is as bad and probably worse than earth which is "water logged."

In this Air-Gas Lift Plant of the Magnolia Petroleum Co. in the Earlsboro, Seminole field there are 14-165 H. P. Bessemer Twin Type Tens.



Six Bessemer Twin Type Tens are the equipment in the Wadsworth Air-Gas Lift Plant of the Mid-Continent Petroleum Corporation.

Eighteen 165 H. P. Bessemer Twin Type Tens in the Carter Oil Co's Stewart gasoline plant, Seminole field.

The four Bessemer Twin Type Tens in a plant of the Wilcox Oil & Gas Co., Seminole, Okla.

Running Time

WHEREVER Bessemer Compressors are found in service, there you will invariably find running records of 99%+; records which give striking proof of their Bessemer performability, whether in gasoline plants, air-gas lift plants or booster stations.

Once a Bessemer is put to work it stays on the job, delivering the utmost in compressor service year after year. It is for this reason that they represent the soundest compressor investment that you can make—judged by mechanical or compressor efficiency, maintenance expense or depreciation. Thousands of installations are constantly demonstrating that Bessemers can be relied upon to deliver this profitable running-time-plus, consistently.

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Natural Gas Developments

TEXAS COURT HOLDS PUBLIC SERVICE FIRST

AUSTIN, Tex., Mar. 10.—Gas companies can not make or enforce contracts the forfeiture of which will deprive citizens of gas, it was held by the Supreme Court in an opinion by Associate Justice William Pierson, affirming the case of the Lone Star Gas Co. vs. the Municipal Gas Co., from Dallas, affirming the judgment of the Dallas Appellate Court.

The case is of importance to gas users in Texas as it holds they can not be deprived of service because the producing and distributing companies engage in a controversy. Hundreds of towns in Texas are being supplied with gas under contracts similar to those held void and many more soon will be furnished with natural gas. According to the opinion, when gas companies disagree they must continue service to the public and the remedy is a suit for damages.

The decision is a complete reversal of the trial court which had sustained demurrers to the Municipal company's petition, which denied breaching the contract and sought an injunction forbidding the Lone Star from cutting off its gas supply. The Appellate and Supreme Courts hold that the trial court was erroneous in sustaining the demurrers.

Forfeiture of three contracts was asserted by the Lone Star on grounds that the Municipal had permitted leaks, was not operating its distributing system efficiently and had not paid for gas sold to it and a fourth contract was sought to be forfeited because it was alleged that the distributing system had made no effort to put plants at Granbury, Itasca, Italy, Milford and West; had not expanded its system and had installed no plant in Waxahachie, besides failing to pay for gas.

The Appellate Court held that the Municipal company showed all elements necessary to obtain the relief sought in its petition and this was unreservedly upheld by the Supreme Court. The latter quoted from the Appellate Court's opinion where it said: "If appellee has sufferer damages by reason of any failure of appellant to perform any of its stipulations of this contract, appellee should be remitted to its suit for damages rather than be allowed to exercise its right of forfeiture."

The Supreme Court said the Appellate Court was correct in overruling the contention that the Cox pipe line bill relegated to the Railroad Commission all power to settle controversies arising under the contracts at issue. The opinion said there was no issue as to rates and the Cox law merely clothed the commission with power to regulate rates, not disputes of this kind.

Judge Pierson said: "Neither can make use of a forfeiture or penalty clause of their contracts to defeat or avoid their duties to perform these public services."

Contracts of the kind in litigation are void as against public policy, it was held, Justice Pierson saying, "plaintiff in error's relation to these contracts, and through them to the consumers, together with its pipe line systems and defendant in error's distributing system, fixes its public duties and obligations in the premises, and makes active and applicable the principle that, as a penalty, this right of forfeiture clause in the contracts can not be invoked, but is unenforceable and void."

The court held that any complaint made by the Lone Star as a basis for breaching the contracts can not be enforced by forefeiture and must be relegated to damages. In all events, the public must have its supply of gas and can not be cut off because of such complaints or contracts.

Attention was called by Judge Pierson to the fact that the Lone Star does not propose to surrender its franchise but only to cut off the Municipal company from its gas supply. Of that he says:

"It can not so lightly cease to perform its public duties and retain the special privileges and powers granted to it by the State. It can not arbitrarily or by virtue of a forefeiture clause in its contracts cease to do that which the public is rightly depending on it to do.

"To give validity to the right of forfeiture provision in their contracts and permit either to forfeit under it, would impair, if not utterly destroy, said service, which they jointly have undertaken for the periods of the contract.

"Under the authorities and the principle announced such a provision is void and unenforceable as against public policy. We approve the holding of the Court of Civil Appeals on this issue also. Its judgment is in all things affirmed."

At one point in the opinion, Justice Pierson declared that contracts of this kind must be made in the interest of the public service "and not destructive thereof or detrimental thereto. Corporations can not contract to subordinate such duties and obligations to their private interest.

"This rule is based on the principle that special franchises and powers are granted to public service corporations, now more commonly called public utilities, in order that they may more efficiently serve the public, and this service is the consideration for the public grant."

The language has the effect of applying the decision to all public utilities in their contractual relations.

GAS EXPORT DENIED BY OKLAHOMA COURT

OKLAHOMA CITY, Okla., Mar. 10.—The State Supreme Court has denied an application of the Magnolia Oil & Gas Co. for a writ of mandamus to compel Secretary of State Graves Leeper to issue a charter which would allow it to transport gas from the State.

By its action the Supreme Court upheld a law passed by the Oklahoma Legislature.

When the oil company applied to the Secretary of State for a charter it was refused by Leeper when the company declined to file an affidavit, stating that it would not pipe gas from Oklahoma.

The oil company, claiming such action violated the interstate commerce laws and that the State law was discriminating and unconstitutional, asked the Supreme Court to compel Leeper to issue the charter.

Chief Justice Fred Branson dissented to the opinion of the court.

MIDLAND GAS SUPPLY

MIDLAND, Tex., Mar. 10.—W. W. Graves, assistant general manager of the West Texas Gas Co., says gas will be turned into the Midland city mains by June 1, a month earlier than promised. The West Texas Gas Co., a subsidiary of Prairie Oil & Gas Co., is piping the gas to Midland from the Amarillo Field. The same rates will be charged in Midland as in other Texas cities. The Midland line is an extension from Lubbock. Tahoka, O'Donnell, Lamesa and Stanton also will be supplied by the new line. Survey crews are now at work. The pipe has been bought and ditching contract let.

DEATH OF GEORGE M'QUAID

George McQuaid

George McQuaid, secretary of the southwest division of the Natural Gas Department of the American Gas Association and in charge of the work of the Texas Public Service Information Bureau, maintained by the Texas Public Utilities, and nationally known newspaperman, died at his home in Dallas, Tex., last week.

Mr. McQuaid was a native of Virginia, having been born at Alexandria. He attended Georgetown University at Washington and was graduated with the degree of bachelor or arts and laws. Soon afterward he came to Texas and took up the practice of law at San Antonio but quickly abandoned the legal field for newspaper work. During the early part of his journalistic career he was connected with the Kansas City Journal, the Guthrie (Okla.) Capital and the Daily Oklahoman.

In 1905 he returned to San Antonio as a reporter for the Express and a year later was made managing editor. He resigned in 1911 to become editor of the Galveston News, where he remained until 1914, when he went to the Dallas News as manager of the Oklahoma City bureau. Returning to Dallas a few years later, he was on the News staff until he was made managing editor about seven years ago. This position he resigned to organize the Texas Public Service Information Bureau. When the southwest division of the gas association was formed, Mr. McQuaid was made secretary.

NEW WEST TEXAS LINE

EASTLAND, Tex., Mar. 10.—Contract for the construction of more than 200 miles of gas line from Chillicothe to Stamford and touching more than 30 West Texas towns has been let by C. O. Moore and associates at a cost of approximately $250,000. The main line from Chillicothe to Stamford will be 8 inches while the lateral lines will be 4 and 6 inches. The system will handle gas from fields in the Texas Panhandle. Construction work will start within three or four weeks.

The Atex Construction Co. is also beginning construction of a 5-mile, 8-inch gas line for the Arab Gasoline Co. from its gasoline plant 7 miles north of Eastland to the Good oil field in the northwestern part of Eastland County, and is just completeing the laying of a 70-mile, 8-inch oil line for the Atlantic Oil Producing Co. from Wink to Midland.

MAGNOLIA REPORTED SURVEYING GAS LINE

FORT WORTH, Tex., Mar. 10.—Magnolia Gas Co. is running a survey for a gas line from Wheeler County in the Panhandle through the Sayre and Chickasha, Okla., gas fields into Fort Worth, according to reports.

At Fort Worth the Panhandle line will connect with another Magnolia line from Dallas and East Texas, giving an interchangeable gas supply for various points.

It also is reported that the Houston Pipe Line Co., which supplies gas to Houston from the Mexican border district, has a surveying party in the field on a line from Houston to Beaumont, where it would connect with another Magnolia Gas Co. line. Magnolia has several gas wells in the border district and presumably would transport gas through the Houston line.

The line from the Texas Panhandle into North Texas would be the third, the others being one by the Lone Star Gas Co., tying into its trunk system at Wichita Falls, and one by the Upham Gas Co. through the northern tier of West Texas counties to Wichita Falls.

GAS EXTENSIONS IN TEXAS

SAN ANTONIO, Tex., Mar. 10. — A dozen or so of the cities in Williamson and Milam and adjoining counties are being solicited for subscribers as consumers of natural gas on a promise of laying a gas line and distributing system to serve natural gas. At last reports Georgetown, county seat of Williamson, Holland, Granger, Round Rock, Bartlett and Hutto had all secured the required number of subscribers and Taylor, in the same county, had secured all but 175 of the necessary 900. The proposition to these seven towns is from the Municipal Gas Co. which is supplying some 22 cities farther north in the State.

Another proposition by the same company has been made to the cities of Cameron and Rockdale in Milam County and they are now at work securing the required number of consumers. In the service the Municipal Gas Co. is giving a group of cities farther north in the State, the supply of gas has been received from the Lone Star Gas Co.

NEW CARBON PLANTS

AMARILLO, Tex., Mar. 10.—Hearing on the application of the Phillips Petroleum Co. to establish two additional carbon black plants in the Panhandle Field will be held by the Railroad Commission of Texas at Austin on March 15.

The Phillips company proposes to erect and operate two plants, one to be located near its casinghead gasoline plant in Section 82, H.&T.C. Survey, Block 46, and the other to be located near its casinghead plant in the McIlroy district in Hutchinson County. It is understood that the plants use waste gas from the casinghead plants.

The Phillips company now has one big carbon black plant in the Panhandle oil field near the town of Phillips.

GAS MERGER COMPLETED

MARSHALL, Tex., Mar. 10.—Merger of the Industrial Gas Co. with the Arkansas Natural Gas & Fuel Corp. has been completed, according to an announcement made here by officials of the Industrial Gas Co. The consolidation of the two companies becomes effective April 1. Recently the sale of the Industrial Gas Co. and the Arkansas Natural Gas Co. to the Cities Service Co. was announced.

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for PIPE LAYING

GAS LINE PIPE

One Crew 270 JOINTS

8,100 FEET of 22" PIPE in 9 HOURS at WASKUM

The Pipe Laying Gang Caught UP with the Right-of-way Gang Clearing the Path

SMITHSTEEL GAS LINE PIPE

A. O. SMITH CORPORATION

Oil and Gas Field Products Division

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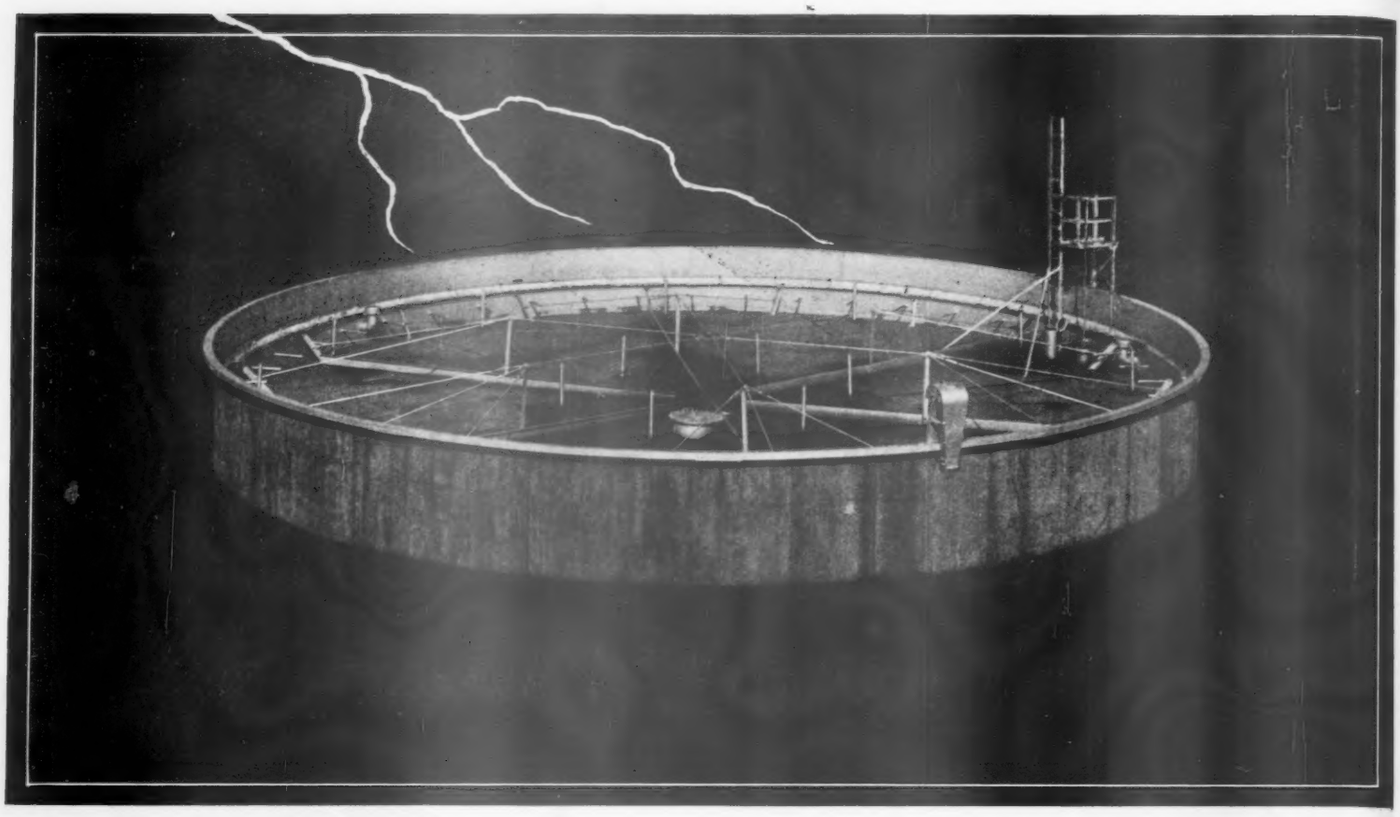

No fear of fire

A FLASH of lightning is the cause of a majority of oil tank fires. Somewhere it finds a mixture of oil vapor and air.

By preventing such mixtures you remove practically all the danger from lightning. That is exactly what a Wiggins Roof does. It seals the oil in and seals the air out. Even though a fire may burn outside a tank protected by a Wiggins Roof, it cannot reach the oil.

There are two types of Wiggins Roofs—the Floater for working tanks, and the Breather for standing storage. The Floater rides directly on the surface of the oil, following the oil level up and down as the tank is filled and emptied. Any vapor formed beneath the roof collects in the sealed space around the tank shell. Air cannot enter the tank. Therefore, no mixture of air and vapor is possible.

The Breather is simply a slightly concave steel roof attached to the upper edge of the tank shell and flexing upward through the horizontal to a slightly convex position as the volume of vapor increases. Since this roof is applied only on tanks in which the oil level remains constant for long intervals this flexing roof provides ample space for the daily variation in vapor volume. There is, therefore, no in and out breathe and consequently no vapor outside to form the explosive mixture in which a fire can start.

The basic principle of Wiggins Roofs—sealing oil in and air out—also eliminates practically all the evaporation loss, which amounts to such a serious drain on the resources of every oil company.

These roofs can be applied to old or new tanks. They are backed by a company that has been a leader in tank and steel plate construction for years. Ask the nearest office for estimates or quotations.

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CHICAGO—2128 Old Colony Bldg. DALLAS—1641 Dallas National Bank Bldg.
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FLOATING *for working storage*

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BREATHER *for standing storage*

O&GJ 3-15-Gray

Fairport Oil Field, Russell County

Kansas Pool, One-Half Mile Wide and 4 Miles Long, Has Produced More Than 3,500,000 Bbls. of 40 Gravity Crude

By Thomas H. Allan[1] and M. M. Valerius[2]*

[1]Geologist, Midwest Exploration Co., Russell, Kans. [2]Petroleum Geologist, 101-102 Wilcox Bldg., Tulsa.

The Fairport oil field, Russell County, Kansas, is at the northwestern edge of the Mid-Continent area. The prominent Cretaceous surface structure becomes stronger in the Permain and Pennsylvanian, and overlies uplifted crystalline rocks. The oil is at the top of the structure in a pool one-half mile wide by 4 miles long which has produced 3,500,000 bbls. of 40 degrees Baume oil during the past three years.

By Thomas H. Allan

The Fairport Field was discovered in November, 1923, when the M. M. Valerius Oil & Gas Co. drilled in the discovery well, No. 1 Carrie Oswald. The surface structure was discovered by local people and brought to the attention of Mr. Valerius. The field lies 150 miles northwest of the Eldorado Field and is the first commercial pool discovered west of that famous oil field. (Figure 1).

*Presented before the American Association of Petroleum Geologists at the Tulsa meeting. Printed in The Oil and Gas Journal by permission of the Association Bulletin.

General Geology

The plains of western Kansas dip gently east. The surface beds of Cretaceous age dip gently northeast. The Greenhorn limestone of the Benton formation makes a broad bench cut by the rivers and tributary drainage giving excellent outcrop for the observation of surface structure.

Stratigraphy

Figure 2 is a columner section or composite log of the field. The Greenhorn limestone composed of thin beds of chalky limestone, separated by blue shale, lies on the surface and makes excellent key beds for detail mapping. Below the Greenhorn is 25 feet of blue marine Graneros shale, the base of the Benton formation. The Dakota is predominantly sandy shale, red in color and contains a great deal of iron. The sandstones are large cross-bedded lenses and contain very salty water. The underlying Comanchean is blue shale and white sandstone.

At a depth of 500 feet is a great angular unconformity. The Cretaceous above, with a regional dip to the northeast, lies on Permian red beds with a regional dip to the northwest. There is a 40-foot bed of anhydrite from 850 to 900 feet deep. A zone containing a great deal of salt extends from 1,200 to 1,500 feet deep, below which are red rock,

(Continued on Page 90)

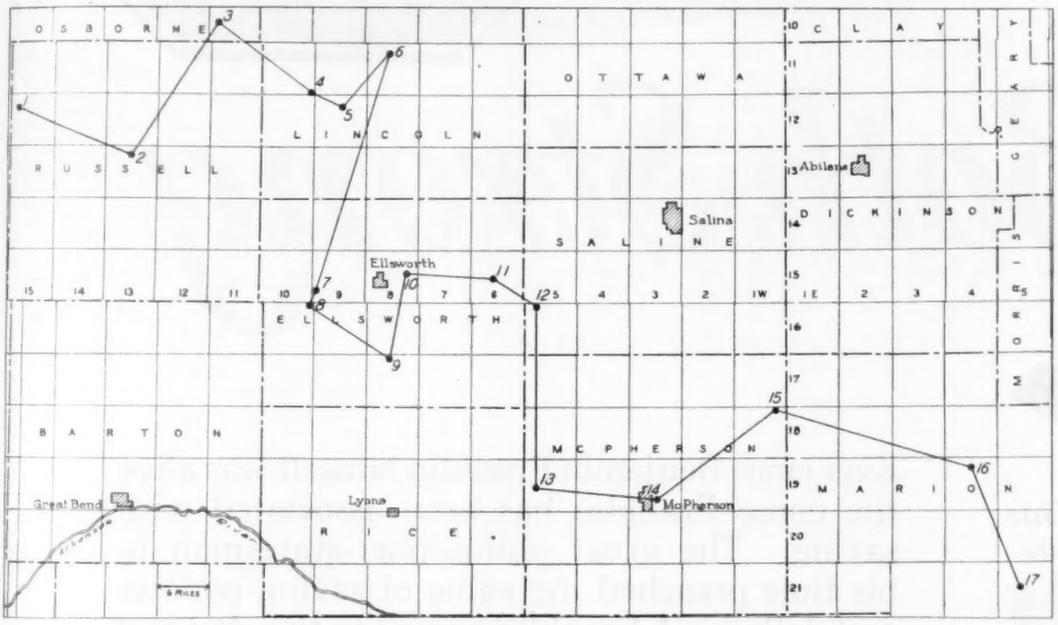


Figure 7—Location of cross-section shown in Fig. 8.

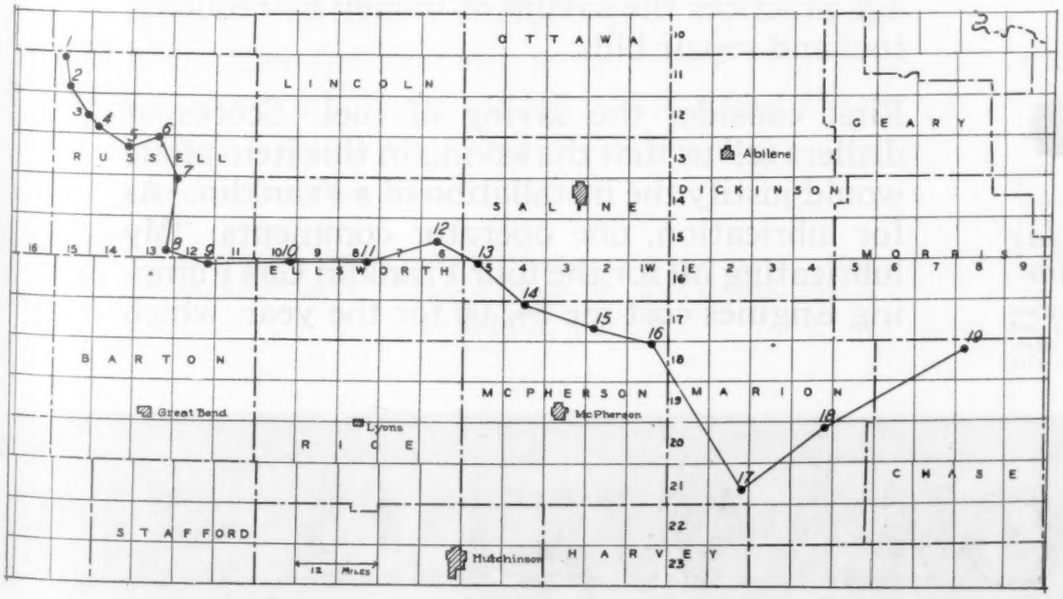


Figure 9—Map showing location of wells used in Valerius cross-section which is shown in Figure 10.

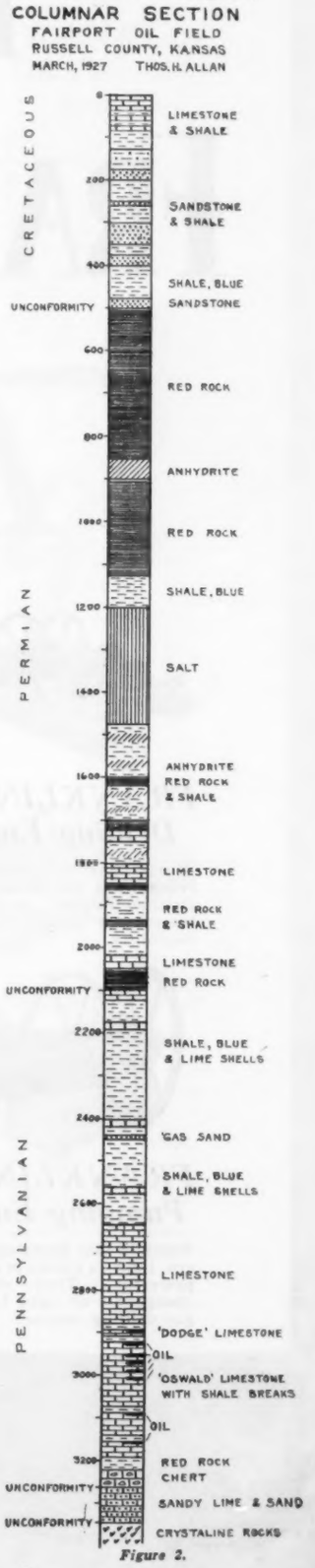
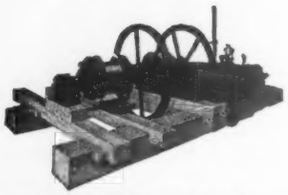


Figure 2.

TWO FRANKLINS

Both Strong



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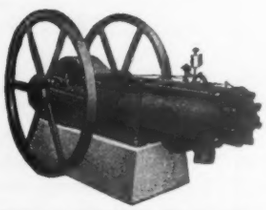


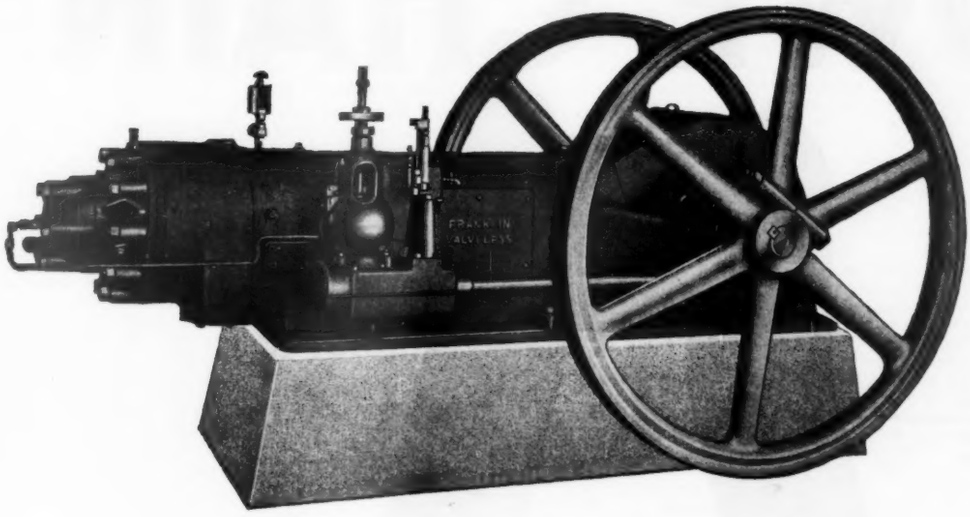
FRANKLIN Gas Pumping Engine

Franklin Gas Pumping Engines are light, economical and powerful. They are interchangeable on same block with gas drilling engine.

Ever since Benjamin Franklin himself was alive the name Franklin has been associated with saving. The great philosopher-statesman in his time preached the value of saving pennies and dollars. A Franklin engine in this day and age practices the saving of money by reducing fuel and repair bills.

First consider the saving of fuel. Scores of drillers tell us that the saving in this item alone would justify the installation of a Franklin. As for lubrication, one operator comments: "My lubricating oil for the four Franklin Gas Pumping Engines cost me $42.00 for the year, which

OIL AND GAS ENGINES



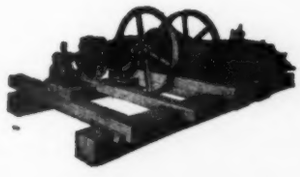
FRANKLIN Oil Pumping Engine

After you have finished drilling move in one of the Franklin Pumping Engines. These pumpers come in 30, 40, 50 and 75 Horse Power.

for Saving

is an average of $10.50 per engine. This seems unbelievable as these engines were pumping 24 hours per day."

But there are other savings not to be overlooked. You save valve grinding, for you must remember the Franklin is *valveless*. You save an appreciable amount for water. And finally, credit yourself with a tidy *repair* saving as hundreds of others have done.



FRANKLIN Oil Drilling Engine

The Franklin Oil Drilling Engine is a single cylinder, three port, two cycle engine. This is Type AO for Mid-Continent or Western Cable Tool Drilling. Price $3,700.00. Sizes for Eastern Service $2,600.00 and $3,350.00. Prices F.O.B. Factory. Complete with self-oiling, reversible drilling clutch, circulating pump and fuel tank.

FRANKLIN VALVELESS ENGINE CO.

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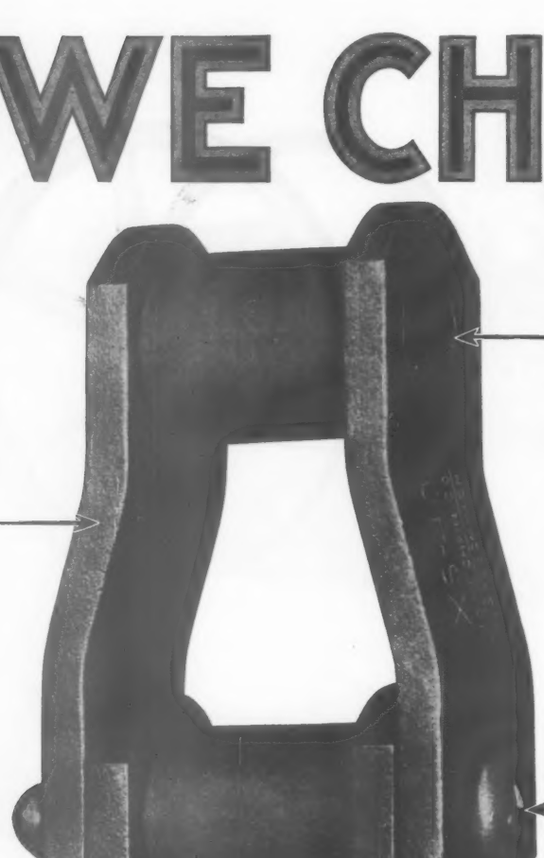
All Oil Fields

HOWE CHAIN


The bushing is press fitted and locked to prevent rotation. Made of alloy steel and heat treated.
The side bar is offset, which helps guide the chain onto the sprocket. Made of .40% carbon steel heat treated for strength.
The pin is made to stand up and to take without injury, the tug, pull and twist of the rotary rig. It is made of a high grade alloy steel, heat treated to give additional strength and wear.
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Alloy steel cotters. To correct a formerly weak point of all chains.

INDICATED above are just some of the high points which made Howe Rotary Chain the chain of the experienced driller.

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ROCKY MOUNTAIN AREA

(Continued from Page 53)

Shipley. Section 5-27-14, Sweetwater Dome, in Wayne County, is still delayed at 2,885 feet where it has been tied up for several weeks with a fishing job. The Embar Oil Co.'s No. 1 Big Six, Section 34-25-21, Grand County, is temporarily shut down at 5,345 feet in sandy shale. Utah Southern Oil Co.'s No. 1 Canyon, Section 27-41-19, east anticline, San Juan County, is drilling at 1,760 feet in lime. Same company's No. 1 John L. Shafer, Section 36-26-20, Cane Creek Dome, is drilling at 500 feet in gray lime. This well is being drilled with oil for fuel from the Frank Shafer well on the Cane Creek Dome The oil is pumped from a horizon at 2,028 feet which is making gas and salt water at the same time. The gas has a tendency to precipitate the salt upon the walls of the pipe and causes a frequent breaking of the sucker rods. A new string of heavier rods is being run. Diamond Oil Co.'s No. 3, Section 29-8s-5e, Buskirk Dome, Utah County, is bottomed at 600 feet. The Uzona Oil Co., which has been operating on the Blooming Dome in Washington County, is reported to have been reorganized and has commenced spudding in two wells on Sections 17 and 19-43s-15w. Western Ventura Corp.'s No. 1 Krumvieda, Section 6-5s-21e, Vernal monocline, in Uinta County, is drilling at 525 feet in a 12½-inch hole. Continental Oil Co.'s No. 1, Section 23-43-92, Boundary Butte Dome, in San Juan County, is cementing a cave at 3,460 feet.

Colorado

The Continental Oil Co.'s No. 1 Peterson, C SW SW, Section 1-9n-79, on the North McCallum Dome, in Jackson County, blew in the past week at a depth of 5,115 feet with an estimated flow of 30,000,000 feet of gas per day. The tools were blown up the hole 1,000 feet, where they lodged and the well has been shut in temporarily. The gas is composed principally of carbon dioxide and the well gives every indication of duplicating the performance of the same company's No. 1 Sherman, the discovery well on the structure, one-fourth mile to the south in the center of the NW NW, Section 12-9n-79, which blew in in December, 1926, making carbon dioxide gas along with a light straw-colored oil testing 54 gravity. The oil and gas came from the well at a temperature of 110 degrees below zero and in a frozen state resembling a white mush. It became famous as the "ice cream" well.

The Peterson well is believed to be bottomed in the top of the Muddy sand of the Dakota series. It is in a much better shape to make a test of the lower horizons than the discovery, as it has 5,100 feet of 6¼-inch casing in the hole which can be lowered to the top of the sand and a smaller string run in which to continue drilling. The Peterson well was not making oil when shut in, but the indications are very strong that oil will follow the gas as it did in the discovery well. The Sherman well blew wide open for a week or more before the oil began to show, while the Peterson well was shut in at once. The Sherman well had an initial production of 20,000,000 feet of gas and 350 bbls. of oil. It subsequently was deepened to 5,147 feet and the production increased to 450 bbls. of oil and 30,000,000 feet of gas. It has been shut in for the winter.

The surface elevation of the Sherman well was 8,200 feet above sea level. The Peterson well has a surface elevation about 30 feet lower. If it is in the Muddy sand at 5,115 feet it indicates that the structure has flattened out on the top. The second, or main Dakota sand, has not been tested on the structure, but if possible, the Peterson well will be carried down in the hopes that the sand will be free of the non-inflammable gas which makes producing operations rather difficult and expensive. One-fourth of a mile west in the center of the SE SE, Section 2-9n-79, the Continental's No. 1 Pollock is bottomed at 4,900 feet, where it is delayed by a fishing job. This well had a show for 70,000 feet of carbon dioxide gas at 4,780 feet. On the South McCallum Dome, the Continental's No. 1 Hoye, SW NE, Section 34-9n-78, is shut down for lack of water at 4,685 feet. This test is believed to be bottomed close to the Muddy sand. It has had several favorable shows of oil and gas and its prospects are very encouraging. It will be watched with considerable interest as conditions may be found to be entirely different in the two structures, though they are very close together.

New Jackson County Tests

Jackson County may have several new structural tests the coming summer. One, at least, has been assured as a result of contracts made. The Producers & Refiners Corp. has made operating agreements with permittees whose permits cover the Pole Mountain area in Townships 6 and 7n, Range 81w. Geological work done has disclosed two structures, all of which now are controlled by the Producers & Refiners. The Pole Mountain structure runs from about the center of Section 5-6n-81 to the center of Section 13 6n-81, and the Fuller anticline runs from the center of Section 34-7n-81 to the center of Section 12-6n-81. The first test probably will be on the Fuller anticline in the NW Section 2-6n-81. This location is approximately 20 miles southwest of the North McCallum operation and 3 miles south of Coalmont, the terminus of the Colorado & Wyoming Railroad, a small line built to develop coal properties and which runs northeast, close to the McCallum wells, to Laramie.

Florence District

The Florence district in Fremont County is attracting more attention than it has received for a long time. This is due in a large measure to the entrance of the Texas Production Co. into the western extension of that pool, this being the first time that any major company has invaded what heretofore has been considered Continental Oil Co. territory. The Florence Field is now producing better than 1,200 bbls. a day, this including production of the old pool, and the south and the west extensions. The Texas Production Co. acquired approximately 100 acres from W. F. McCormick, and is believed to have taken over other holdings in that area. The consideration paid for the McCormick properties has not been disclosed, but is reported to have been $146,000, of which half was in cash and balance out of production. There are three producing wells on the acreage which is divided up into small tracts of from 5 to 10 acres each. One of these, McCormick's No. 3 (No. 1 Lippis) NW SE, Section 3-19-70, came in just before the deal was closed. It reached the pay at 1,850 feet and made 12 bbls. per hour initial. The Texas Production Co. is expecting to drill about 10 wells at once. The district, which extends about 10 miles south of Florence and 8 miles to the west, forms an arc with Florence, the second oldest pool in the country, in the center. It is scheduled for a big play this summer. The Denver & Rio Grande Western Railroad runs through the west extension between Canon City and Florence. The railroad right of way from the Canon City city limits to the east, a distance of 4 miles, was held under lease last year by the Continental Oil Co., which drilled two wells on the lease. One of these was on the NE NE SW Section 35-18-70, which was abandoned at 2,160 feet. Both wells were dry and the company surrendered its lease. The right of way is 30 feet wide on one side and 25 feet on the other side of the tracks. Deeper drilling has recently brought in production in that area and N. B. Cool, of Colorado Springs, was successful in getting the railroad lease on a 12½ per cent royalty. This has been turned to the Canon City Oil Co., a new concern, which will drill it on a 70-30 basis with Cool. One well is being started. On account of the narrowness of the strip, considerable offsetting will be required. Other trades are being reported. One of these is for 7,500 acres to the west and south of the west extension reported to have been taken by Chicago parties.

Field a Puzzle

The Florence Field has been one of the puzzles of the industry. The oil is found in the Pierre shale in a syncline and sand wells have all shown water. The oil is an especially desirable grade on account of its lubricating qualities. Some geologists held to the theory that the oil had migrated from a major pool at some other locality, while others are of the opinion that it originates in the shale where the formations are badly broken up and crushed and that it forms in pools in the pockets and crevices in the shale. The oil from the old pool, which has produced more than 12,000,000 bbls., was rather uniform in quality and of 30 gravity. The oil in the first wells drilled to shallow depths in the west extension near Canon City in 1927 was of approximately the same grade and the two pools were considered as one. However, some of the wells drilled recently in the outlying area have been producing oil of a slightly higher gravity, the average being around 32. Also, it is being found in sandy shale instead of shale. For some time the Continental has been posting a flat price for the Florence crude, which has averaged slightly more than the price for corresponding grades in the Mid-Continent and Wyoming fields. At present the posted price at Florence is $1.15. The average gravity for the two pools is 31 degrees, which in the Mid-Continent and Wyoming fields commands a price of $1.11. There is considerable speculation as to whether a schedule will be posted offering a flat price, or pased upon the actual gravity. Some see prospects of The Texas Company offering a premium over Mid-Continent prices, which, if it develops, is going to further stimulate the activity. Continental estimates that it controls possibly 80 or 90 per cent of the likely looking acreage in the district. The Texas Company is expecting to ship its crude to its refinery at Casper, but there is a possibility that some exchange which will save the long haul may be made with the Continental.

Sheffer & Benzona's No. 1 Colarelli, NW NE SE, Section 3-19-70, in the west extension of the Florence Pool, struck a pay at 1,650 feet. It has not been tested, but is estimated at 100 bbls. initial. Continental Oil Co.'s Kissinger & Wright, NE NW, Section 4-19-70, the farthest west of the producers in the west extension, is drilling at 1,880 feet. It had some oil at 1,640 feet. Same company's No. 1 H. C. Watts, SE SE, Section 35-18-70, produced around 400 bbls. total from 1,294 feet and probably will be drilled deeper. Same company's No. 1 Machetti, SW NW, Section 2-19-70, is drilling at 300 feet, and No. 1 Andy Smith, SW SW, Section 3-19-70, is drilling at 150 feet. Same company's No. 1 Adamic, NW NW, Section 12-19-70, is rigging up.

The Southern Colorado Power Co. is extending a transmission line to the new area and electric power will be used in pumping some of the wells and probably for drilling. Continental Oil Co. has installed a 150-horsepower motor at one of its new wells and will experiment to determine whether there is any saving in drilling costs.

Moffat County

Moffat County operations show neither any completions nor new wells started. The Midwest Refining Co.'s No. 4-M Shaw, NW NE, Section 27-4-92, on the Iles Dome, has caused some disappointment as a result of the appearance of water in the Morrison sand. This horizon, which lies below the Dakota and the Sundance, has never been looked upon as a favorable source for oil in the Rocky Mountain area, but when it showed production in some of the tests on the Iles and Moffat Domes, it was hoped that it might mean a reversal of the conditions generally found in that horizon. However, it is not, with one exception, fulfilling this hope.

This well had an initial production of 1,010 bbls. from the Morrison at 3,236-76 feet when completed last December. This was not only a surprise, but contrary to what was expected. About two weeks ago the production dropped considerably and then the well went off altogether. The tools were run to clean out and drill deeper to 3,280 feet, 4 feet deeper into the sand. The oil came back, flowing about 100 bbls. per hour, of which part was water. Subsequently it made as high as 2,400 bbls. of pipe line oil in 24 hours, but now is flowing 2,195 bbls. of fluid per day through a five-eighths-inch bean, of which 80 per cent is water and 20 per cent oil. While this is a disappointment, it is offset very largely by the fact that it has but little bearing on the Sundance sand below which has proven to be a consistent producer in the few wells that have been drilled into it. It will be recalled that the Texas Production Co.'s Knowlton well on the Moffat Dome flowed around 100 bbls. from the Morrison sand, but that this flow ceased when the drill encountered oil in the Sundance. It looks as if the Morrison oil is coming up from below and that the sand is merely living up to its reputation. The Shaw well was started as a test to the Sundance, but when oil was found in the Morrison it stopped at that horizon. It probably will be drilled down to the Sundance as originally planned should conditions not improve shortly. There is a possibility that the water is coming from the Dakota, but until more work is done on the well, that will remain only a conjecture.

Iles Dome

Drilling operations on the Iles Dome are as follows: Midwest Refining Co.'s No. 8 SD-2 Parkinson, NW NW, Section 23-4-92, cementing 15½-inch at 100 feet. Same company's No. 7-SD Parkinson, NW NW, Section 23-4-92, drilling at 2,545 feet in gray shale, and No. 33-SD Parkinson, SW SE, Section 22-4-92, rigging up. Texas Production Co.'s No. 17 State, NW SE, Section 15-4-92, drilling at 3,120 feet and carrying the 10-inch. Same company's No. 6 Parkinson, NW NW, Section 23-4-92, drilling at 2,673 feet, and No. 13 Parkinson, NE SW, Section 22-4-92, drilling at 2,675 feet. Shaffer Oil & Refining Co.'s No. 205 Yarg, NW NW, Section 26-4-92, failed to get a shutoff and is recementing the 8¼-inch at 3,505 feet. Alliance Oil Co.'s No. 1 Milliken, SW cor. Section 14-4-92, drilling at 1,175 feet.

On the Moffat Dome, the Texas Production Co.'s No. 10 Knowlton, which swabbed 332 bbls. initial from the Sundance at 4,400-80 feet, was tubed and put on the pump. It made 545 bbls. in the first 17 hours, part of which was natural flow, and 740 bbls. the first 24 hours. It is a completion at this depth. A location has been made for No. 11 Knowlton 600 feet to the east of No. 10. This location is outside of the contour within which lies the Dakota sand wells and a test at that point will reveal whether the Sundance is productive over a larger area than the Dakota. The Knowlton No. 10 is the only test below the Dakota on that structure.

In Huerfano County, the Kinney-Coastal Oil Co.'s No. 1 Pinos, SE Section 24-26s-68, Escondido Dome, joint with the Texas Production Co., topped the Dakota at 1,365 feet, and passed out of the Lakota at 1,665 feet. Both horizons showed some water, it rising 300 feet in the hole. Drilling is in progress at 1,712 feet, carrying the 6⅝-inch casing. The Pennsylvania at 2,200 feet is the objective. So far the well is checking very closely with the geology as worked out before spudding.

Marland Plans

The long-expected plans of the Marland Oil Co. for a test in southeastern Colorado were released the past week. The company is digging cellar for its No. 1 Mesa, 1,000 feet west of east line and 1,650 feet south of north line, NE NE, Section 8-30s-50, on the Table Mesa Dome, in the western end of Baca County. This puts it in the NW cor. SE NE of the section. Plans call for drilling with a rotary to 3,500 feet when it will change over to cable tools. It is a Pennsylvania test and will go 5,000 feet, if necessary. This is the only active operation in the county. The Phillips-Middleton Syndicate's No. 1 Jones, Section 26-34-48, has been shut down for months at 2,100 feet. It topped the salt at 1,600 feet and bottomed it at 1,900 feet. The Vickers Petroleum Co., of Wichita, Kans., is reported to have leased 30,000 acres on the Black Hills structure in Las Animas County, and to have made a loca-

tion in Section 25-28s-57. Phillips Petroleum Co.'s No. 1 Haskins, Section 23-29-56, Red Rock structure. Las Animas County, is drilling below 1,200 feet. The Mountain States Gasoline Corp. has made a location for its No. 5 Sandoval on the SE NE, Section 4-34-62, San Francisco Creek Dome. This will be a test to the Morrison at 2,400 feet.

Wyoming

One of the largest acreage deals in the Oregon Basin Field in Park County since the Ohio Oil Co. purchased control of the Enalpac Oil & Gas Co. several months ago is reported from Cody to the effect that John W. Leonard, of the Leonard Petroleum Co., of Pennsylvania, had acquired control of the holdings of the Hoodoo Oil Co. This company was formed a few months ago by E. V. Robertson and associates, of Cody, to take over the Inez Ethel Frisby permit comprising sections 25 and 26 and parcels of land adjoining the state section in Section 36-51-101. The Leonard Petroleum Co. already is an extensive owner of leases in the field operating under the name of the Linco Petroleum Co., and has three wells drilling. The purchase price is reported to have been $10,000 cash; $40,000 upon approval of titles; $50,000 on or before May 15; and $62,300 within 60 days after the Embar sand is reached, and $486,900 to be paid out of production. Besides government royalties, contract calls for 12½ per cent to permittees and Hoodoo Oil Co. on preferential acreage and 5 per cent on non-preferential. Contract calls for maximum development. Hoodoo Oil Co. has one well drilling in its No. 1, NE, Section 36-51-101, which was last reported rigging up rotary at 1,409 feet. Cody Petroleum Co.'s No. 1 Klindt, NE SE NE, Section 7-51-100, which has been making around 500 bbls. a day while drilling in, has shown an increase as the drill neared the Tensleep sand and was making better than 700 bbls. at last reports. Ohio Oil Co. is drilling in in its No. 3 Sonners, Account 1, NW NW, Section 8-51-100, after running 6¼-inch to top of Embar at 3,351 feet. Same company's No. 1 Baston, NE cor. Section 6-50-100, which topped the Embar at 3,365 feet, also is drilling for the Tensleep. Continental Oil Co.'s No. 1-A State, Section 16-51-100, is making better progress than for some time and is drilling at 1,900 feet, with cable tools. Producers & Refiners' No. 1 Frisby, Section 32-52-100, is drilling at 1,532 feet in shale. Other wells show no important changes.

La Barge District

In the La Barge district, in southwestern Wyoming, there is very little activity at present, most of the wells being shut down for the winter. The Reece Oil Co.'s No. 2, NW Section 27-27-113, is waiting on pumping equipment to go on production. The Texas Production Co.'s No. 1 Davis, Section 15-26-113, is pulling 6¼-inch casing to plug back to sand at 820 efet. This sand swabbed 44 bbls. of oil and 200 bbls. of water before being deepened. Wyoming Producers Oil Co.'s No. 1, Section 30-28-113, is running 6¼-inch casing at 1,800 feet. Wooten Oil Co. is rigging up to deepen an old hole in Section 26. Seabeck Oil Co.'s No. 1, Section 35-27-113, is rigging up to drill deeper. At last report it was shut down at 1,025 feet waiting for orders.

In Carbon County, the Producers & Refiners Corp.'s No. 19, Section 25-26-87, on the East Ferris Dome, which was showing for a producer in the Tensleep sand at a total depth of 4,525 feet, 2 feet into the sand, has been on a test, according to reports given out by the company, and is plugging back. The 6¼-inch casing is being carried at 4,514 feet. This well showed for 250 bbls. in the Sundance at 2,628-70 feet. Same company's No. 24, Section 26-28-87, is bottomed at 2,625 feet and rerunning 12½-inch casing after replacing collapsed joint. No. 8, Section 7-26-89, Wertz Dome, is repairing casing. Total depth, 2,981 feet.

Uinta County

According to Dan E. Hanson of Long Beach, Calif., Olson & Zimmerman's No. 1, Section 6-14-118, Unita County, and A. R. Johnson's No. 1, NW NW, Section 10-14-118, same county, have not been abandoned. Mr. Hanson states Olson & Zimmerman's well has good showings at 2,269 feet and that the Johnson well is producing 100 bbls. daily at 910 feet.

In Niobrara County, the Buck Creek Oil Co.'s No. 1 Delahoyde, Section 25-37-63, Ant Hills Dome, failed to get a shutoff at 4,163 feet and is recementing in an effort to plug back and save production at 3,946-52 feet, where it swabbed 250 bbls. Same company's No. 1 Hattie Peterson, NW cor. Section 30-37-62, is drilling at 3,635 feet.

Salt Creek

One completion was reported in Salt Creek, this being the Midwest Oil Co. and Wyoming Associated Oil Co.'s No. 11-A, NW, Section 36-40-79, which was deepened to 1,668 feet in the second Wall Creek. It has not yet been tested. Mutual Oil Syndicate's No. 1, Murane Permit, SW Section 3-39-79, is drilling at 1,200 feet. If shale oil is not encountered where expected at 2,100 feet, it will be drilled on down to the Wall Creek sands. Teapot Consolidated Oil Co.'s No. 1 Beaton, NE Section 2-38-78, is temporarily shut down at 2,400 feet. Teapot Oil & Land Co.'s No. 1, Section 30-38-78, is drilling at 2,860 feet, and first Wall Creek is expected at around 3,100 feet.

In Albany County, the Union Oil Co. of California has made a location for its No. 1 Bath, Section 33-17-75, on the Little Laramie structure, 15 miles west of Laramie. The structure is said to have a very large closure. The Dakota is expected at around 3,500 feet.

In Fremont County, the Texas Production Co.'s No. 1, Section 1-33-95, Alkali Butte Dome, is drilling at 2,600 feet. It is in a gas sand with barium in the hole to keep back pressure. This is intended as a test to horizons below the Wall Creek, which has shown gas in another well drilled on the same section by a former subsidiary of the Continental Oil Co. Producers & Refiners' No. 1, Section 34-34-92, Muskrat Dome, is drilling in shale at 2,870 feet.

In Sweetwater County, Custer Petroleum Co.'s No. 1 Baackas, Section 24-12-100, is reported drilling at 1,170 feet, and the Somir Petroleum Co.'s No. 1 Wheeler, Section 13-12-100, is drilling at 1,135 feet. Both of these wells are in the Hiawatha area.

Montana

Heavy shipments of crude to Canadian refineries from Montana has caused a slight shortage of fuel oil in the latter State. The Great Northern Railroad is now importing California crude for fuel on its lines in Montana in order to permit the Montana refiners to sell their oil to the Canadians.

The recent order of the Canadian government to allow tops to be imported into Canada without import duties has reacted very favorably on the oil operators of Montana and other states and Canada is now having a great influx of crude oil as a result. The Montana fields are not able to supply the demand and some 400 cars of Wyoming crude passed through Great Falls during the past two weeks. These were destined for Lethbridge and Calgary, to the Imperial Oil Co.

T. P. Jones, a farmer, living near the Baker gusher in Sunburst Field, has no wells and only the surface rights to his lands. Last week he sold crude to the amount of $10,000 that he had caught in a large earthen reservoir when the gusher was flowing oil over that part of the country. An 80-acre tract on Section 8-34-1, near the big well sold the past week for $42,000, or at the rate of $562.50 per acre. This tract was sold by the Dakota Motnana Oil Co. to the Radford Oil & Gas Co. The Baker well is flowing with a bean in the flow line and is making about 200 bbls. daily at present.

Another deal was completed the past week for a tract of oil land in the new Banatyne Field north of Great Falls. The Hardrock Oil & Gas Co. bought a tract of 160 acres from the Montana Pacific Oil Co.'s holdings. This tract adjoins the Genou Oil & Gas Co.'s land where the two producing wells are located. The price was not made public.

Second Baker Completion

The first completion since the Baker well came in a gusher was made last Wednesday on Section 9-34-1, by the same syndicate that owns No. 1 Baker. The new well is No. 3 Baker and when it first reached the Ellis sand at 1,370 feet the well filled and started to flow oil over the casinghead. Within an hour the well had changed to water and the oil disappeared, but as the well was permitted to flow, it commenced to throw the water out in heads and then the oil came back. At the close of the week the well is making around 300 bbls., part water, but the water flow is steadily going down.

On Section 18-34-1, the Hannah Porter Oil Co. has completed a rig and is ready to spud in.

On Section 27-35-3, the Majestic Oil Co.'s well that should have been a completion is fishing for a lost string of tools. On Section 7-34-1, the Radigan interests are tubing for a pump test in No. 7 Harte, brought in last week.

Montana is now using a large part of her own output of kerosene and gas oil as fuel within her own boundaries. The large number of gas-electric trains being operated on the branch lines of the railroads in the State use a great quantity of these products in the aggregate and the tractor trade has grown to such proportions that last year the need of kerosene and distillate for these machines became acute during the harvest season. Now that practically all farm work on the range land is done with tractors instead of horses, and the ranchers are finding larger profits in harvesting larger crops, the importation of tractors to Montana is to that State as the automobile trade is to the nation, there appears to be no point of saturation. At present, tractor demonstrations are being held all over the State and a greater number of these machines are expected to be purchased this year than in any two previous years.

This condition is certain to result in a heavy demand for the petroleum products necessary to power the tractors and such petroleum products can be skimmed at any little skimming plant. In spite of the advance in crude prices at Sunburst, the small refiner expects a good year this season in supplying tractor oils.

ROCKY MOUNTAIN PRODUCTION
Runs From the Field Week Ending March 10

Wyoming	
Salt Creek	38,470
Big Muddy	2,670
Grass Creek	2,480
Elk Basin	1,130
Greybull	10
Rock River	2,780
Lance Creek	660
LaBarge	970
Poison Spider	210
Hamilton	1,220
Oregon Basin	500
Osage	380
Lander	700
Ferris	60
Byron	30
Lost Soldier	4,270
Simpson Ridge	30
Total Wyoming	56,570
Montana	
Cat Creek	1,770
Lake Basin	170
Kevin-Sunburst	9,000
Total Montana	10,940
Colorado	
Florence	1,214
Moffat	1,291
Fort Collins	3,182
Iles Dome	1,217
Rangely	100
Tow Creek	422
Boulder	25
Total Colorado	7,451
New Mexico	
Rattlesnake	....
Hogback	520
Cap Rock	211
Table Mesa	351
Artesia	1,268
Total New Mexico	2,350
Total Rocky Mountain	77,311

ARGENTINE OIL APPROPRIATION

The Argentine government has issued a decree authorizing the expenditure of a stipulated sum of money for the development and operation of state oil fields in the 1928 fiscal year. Part of the sum will be placed at the disposal of the Director General of Mines and Petroleum for general purposes.

DEATH OF B. H. DAY

Benjamin H. Day, 65, Wichita Falls, Tex., oil operator, died last week in a Wichita Falls hospital.

OKLAHOMA FIELDS

(Continued from Page 44)

from Misener sand at 3,390-92 feet. Independent Oil & Gas Co.'s No. 8 Wolfe, NW cor. SW NE, Section 18-14-10, Hall-Donnelly Pool, was completed in Wilcox sand at 3,401-27 feet for 260 bbls. Mid-Continent Petroleum Corp.'s No. 2 Harjo, NW cor. NE NE, Section 18-14-10, is dry and abandoned in Wilcox sand at 3,427-51 feet.

Logan County

Barnsdall Oil Co. made location for No. 1 De Jarnett, SE cor. SW, Section 19-19-4w, Lovell area. Roxana Petroleum Corp.'s No. 1 McDaniels, NE cor. SW, Section 16-18-4w, is producing 102 bbls. after a shot of 10 quarts in sand at 4,007-4,012 feet.

Osage County

Peters Petroleum Co. and Producers & Refiners Corp. made location for No. 1, SE cor. NE, Section 30-26-7, Burbank Pool. Savoy Oil Co. made location for No. 1, NW cor. SW NE, Section 24-22-10.

Peters Petroleum Co.'s No. 9, SW cor. SE NW, Section 17-27-6, Burbank Pool, made 150 bbls. from Burbank sand at 2,920-70 feet. Gypsy Oil Co.'s No. 5, NW cor. NE NW, Section 28-27-6, had Burbank sand at 2,906-57 feet and swabbed 25 bbls. after a shot of 120 quarts. No. 8, NW cor. SE, Section 28-27-6, is dry and abandoned at 2,995 feet. No. 10, SE cor. NW SE, Section 28-27-6, has been abandoned at 2,930 feet. Osage Gas Production Co.'s No. 386, NW cor. SW, Section 5-27-11, has been shut in for 250,000 feet of gas in sand at 819-45 feet.

Phillips Petroleum Co.'s No. 2, NW cor. SW NW, Section 2-26-6, made 30 bbls. from sand at 2,801-45 feet. Carter Oil Co.'s No. 1, NE cor. SE, Section 3-26-6, has been completed for 1,145 bbls. in sand at 2,737-2,822 feet. No. 2, NW cor. NE SE, Section 3-26-6, made 520 bbls. in 14 hours from sand at 2,758-2,817 feet. No. 7, NW cor. SE, Section 3-26-6, is dry and abandoned at 2,895 feet. Kewanee Oil & Gas Co.'s No. 10, SE cor. NE NE, Section 3-26-6, was shot with 110 quarts in sand at 2,752-95 feet and made 90 bbls.

Kay County Gas Co.'s No. 2-A, C SW NE, Section 22-24-7, has been completed for 20,000,000 feet of gas in sand at 1,195-1,210 feet. Marland Oil Co.'s No. 9, NW cor. NE SE, Section 20-23-8, is dry and abandoned at 2,694 feet after deepening from 2,640 feet. The Prairie Oil & Gas Co.'s No. 1, NE cor. Section 10-26-6, made 40 bbls. from sand at 2,861-2,917 feet.

Payne County

Pure Oil Co.'s No. 1 Varley, NE cor. SW SE, Section 7-18-4, swabbed 45 bbls. from sand at 4,351-53 feet.

Pawnee County

Moore and others' No. 4 Sharp, NE cor. SW, Section 34-21-8, was completed for 8 bbls. in sand at 1,659-71 feet.

Tulsa County

Mid-Co. Oil Co. has a machine at the location for No. 1 Boone, NE cor. NW NW, Section 24-18-13. J. F. McGuigan has a machine on the ground for No. 2 Island, SW cor. SE SE, Section 24-18-14. Ellen Oil & Gas Co.'s No. 3 Island, NW cor. NE NE, Section 25-18-14, is spudding. Hershal & McGill's No. 1 Nave, SE cor. Section 24-17-14, is spudding. Devonian Oil Co. moved a machine out for No. 1 Self, SW cor. NE, Section 12-16-12.

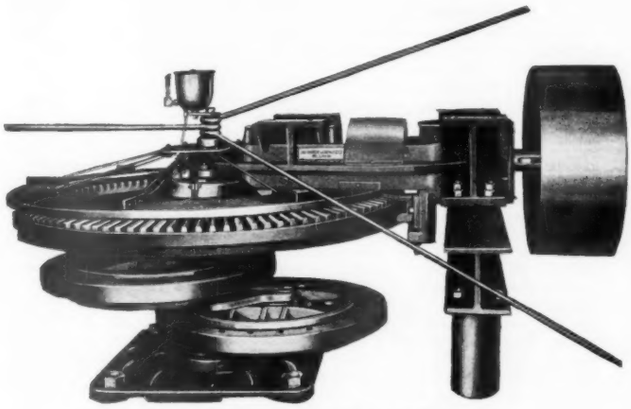
Glidden Oil Corp.'s No. 1 Riverbed, NW cor. SE, Section 15-19-11, made 450 bbls. from Hominy sand at 2,106-45 feet. Black and others' No. 1-A Oswalt, NW cor. SW SW, Section 6-17-13, has been abandoned at 1,910 feet.

Beckham County

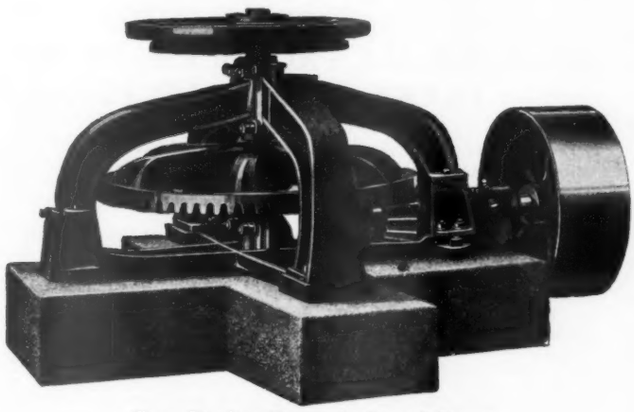
Magnolia Petroleum Co. has the rig up for No. 1 Martin, NW cor. NE NE, Section 28-9-23w.

Caddo County

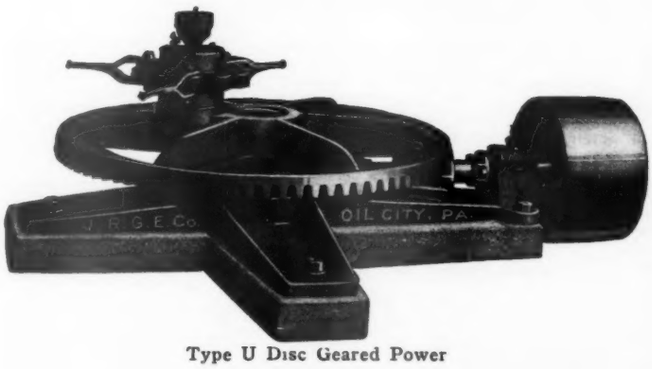
English Drilling Co. has built the rig for No. 3 Gafney, CEL NW SE, Section 31-6-9w. Caddo Oil Co.'s No. 2 Cutshall, NE cor. SW, Section 5-5-9w, is pumping



Type PG Underpull Geared Power



Type R—One Eccentric Geared Power



Type U Disc Geared Power

3

Types of

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60 bbls. from 1,860 feet where pipe was set, to 2,420 feet total depth.

Carter County

Magnolia Petroleum Co. is erecting the rig for No. 2 Cudd, NE cor SW NW, Section 23-1s-3w. No. 2 Lewis, NE cor. NW, Section 23-1s-3w, is drilling at 2,430 feet. Humble Oil & Refining Co. is erecting the rig for No. 4 Spears, SW cor. SE NW, Section 29-1s-3w.

Atlantic Oil Producing Co.'s No. 1 Eason, NE cor. SE SE, Section 19-1s-3w, made 82 bbls. from sands at 2,917 feet to 3,222 feet. Magnolia Petroleum Co.'s No. 1 Cudd, SW cor. NW, Section 23-1s-3w, has been completed for 76 bbls. in a series of sands at 2,353 feet to 2,597 feet Humble Oil & Refining Co.'s No. 2 Gillispie, SE cor. NW, Section 33-1s-3w, made 86 bbls. initial from sands at 3,423-29 feet and 3,429-45 feet.

Cotton County

Collum and others' No. 1 Priddy, NW cor. NE NE, Section 3-2s-10w, is drilling at 140 feet.

Grady County

Noble & Westerfelt made location for No. 5 Smith, NE cor. SE SW, Section 26-5-8w. Commerce Development Co. moved the rig timbers out for No. 1 Parks, NE cor. SW, Section 13-4-8w.

Oklahoma Natural Gas Corp.'s No. 4 Smith, SW cor. Section 26-5-8w, has been completed for 30,000,000 feet of gas at 2,393 feet. Wirt Franklin Oil Corp.'s No 1 Garden, SE cor. SW NE, Section 1-4-7w, had sand at 2,003-12 feet and is making 1,000,000 feet of gas. Carter Oil Co.'s No. 10 Wolford, NW cor. SW SW, Section 16-3-5w, Carter-Knox Pool, has been abandoned at 2,704 feet. No. 2 Costello, SE cor. Section 21-3-5w, swabbed 247 bbls. from sand at 1,718-39 feet.

Muskogee County

Ernest Price has a machine at the location for No. 3 Woodall, CEL W half SW SW, Section 20-15-16. J. M. Foltz' No. 6 Taylor, CNL SE SE, Section 28-15-17, is drilling at 180 feet. J. O. Tilly and others' No. 1 Sykes, SE cor. NE SE SE, Section 33-15-19, is spudding. W. A. Peterson's No. 8 H. James, CSL SE SE, Section 18-14-17, is rigging. C. A. Lovelace and others' No. 1 Cobb, NE cor. SE SE, Section 1-14-18, is spudding. No. 2 Cherry, CEL SW NW, Section 2-14-18, is also spudding. Walton Oil Co.'s No. 1 Kell, NW cor. NE SE SW, Section 6-14-19, is spudding.

Bryan & Emery's No. 1 Lowery, NW cor. SW NW SW, Section 9-15-15, is dry and abandoned at 1,900 feet. D. L. T. Oil Co.'s No. 2 Mackey, SE cor. SW SW, Section 9-15-18, has been completed for 3,500,000 feet of gas in sand at 785-816 feet. Decius & Garrett's No. 1 Marshall, NW cor. SE, Section 27-14-16, is dry and abandoned at 1,815 feet. W. R. Sommerville's No. 2 Carver, NE cor. SE, Section 4-13-19, has been abandoned at 1,506 feet.

Okfuskee County

B. Foster and others' No 1 Jackson, CNL NW SW, Section 30-11-11, is a rig on the ground. Mid-Continent Petroleum Corp.'s No. 1 Morris, NE cor. SW NW, Section 29-10-9, has been completed for 115 bbls. Misner sand at 3,892-99 feet. Amerada Petroleum Corp.'s No. 4 Palmer, SW cor. SE SW, Section 36-10-9, originally completed for a gas well at 3,395 feet, was deepened to 3,430 feet in the sand and is making 25 bbls. oil.

Okmulgee County

McRay and others' No. 6 Colbert, SW cor. SE NE, Section 14-14-14, is spudding. J. E. Wallace's No. 7 Colbert, CNL SW SE, Section 14-14-14, is spudding. H. C. Detrick and others made location for No. 1 Smith, NE cor. SW, Section 17-13-11.

Laurel Oil & Gas Co.'s No. 1 Brown, NW cor. NE, Section 22-16-12, has been completed for 25 bbls. in Dutcher sand at 2,125-40 feet. Jack Summers' No. 2 Rowe, SE cor. NW NE, Section 10-15-14, made 30 bbls. from sand at 942-94 feet. G. E. Pope, trustee, has a machine on the ground for No. 1 Dense, CNL SE SE, Section 14-14-12.

Pontotoc County

W. R. Ramsey is building the rig for No. 1 Roberts, NW cor. NE, Section 32-5-5. C. B. Shafer's No. 7 Yoakum, SW cor. Section 9-5-8, is a machine at the location. McCullouch and others moved rig material out for No. 1 Chisholm, SW cor. Section 4-4-7. Harry Diamond made location for No. 1 fee, NE cor. SE SW, Section 8-4-7. E. W. Whitney made location for No. 1 Dyer, SW cor. NW SE, Section 8-4-7.

Louisiana Oil Refining Corp.'s No 8 Harjo, SW cor. Section 17-5-8, Allen Pool, is making 15 bbls. from sand at 2,680-90 feet and 2,690-2,712 feet. W. R. Ramsey's No. 4 Milner, SE cor. Section 18-5-8, has been completed for 150 bbls. in sand at 2,281-2,347 feet.

Pottawatomie County

Indian Territory Illuminating Oil Co. has the rig on the ground for No. 1 White, NW cor. SE, Section 21-7-5, Maud area. Atlantic Oil Producing Co.'s No. 1 Foreman, NW cor. SW NW, Section 18-9-5, flowed 380 bbls. from Hunton lime at 4,244-68 feet. Gypsy Oil Co. and Bu-Vi-Bar Petroleum Co.'s No. 1 Sullivan, NW cor. NE SE, Section 25-7-3, Pearson Pool, is swabbing 165 bbls. from Viola lime at 4,298-4,312 feet. Magnolia Petroleum Co.'s No. 1 Crawford, NE cor. SE SW, Section 25-7-3, is pumping 89 bbls. from Viola lime at 4,188-4,226 feet. No. 1 School Land No. 77, NE cor. SW, Section 36-7-3, made 1,160 bbls. from Viola lime at 4,285-95 feet.

Seminole County

Mid-Continent Petroleum Co. is building the rig for No. 5 Saloche, SW cor. Section 33-10-6. Blackwell Oil & Gas Co. and others made location for No. 1 Bean, SE cor. NE SW, Section 6-10-7. Carter Oil Co. is rigging up at No. 2 Jackson, SE cor. NW NE, Section 11-7-6, Little River Pool. Gypsy Oil Co. is erecting the rig for No. 1 Denmark, NW cor. SW SE, Section 11-7-6. The rig is being built for No. 3 Renton, SW cor. NE NE, Section 11-7-6. Mid-Continent Petroleum Corp.'s No 1 Bruner, SE cor. Section 11-7-6, is rigging up rotary tools. Carter Oil Co.'s No. 1 Wilson, SW cor. Section 12-7-6, is rigging up rotary tools. Gypsy Oil Co.'s No. 1 Hulhoke, NE cor. SE, Section 14-7-6, is rigging up a rotary outfit. No. 1 Canard, SE cor. NE NE, Section 22-7-6, is a rig under construction. Independent Oil & Gas Co.'s No. 5 Hotulke, SE cor. NW, Section 23-7-6, is rigging up rotary tools.

Roxana Petroleum Corp is building the rig for No. 1 Hotulke, NE cor. NW, Section 23-7-6. The Texas Company's No. 1 Hotulke, NW cor. SW NW, Section 23-7-6, is rigging up. Carter Oil Co.'s No. 1 Larney, NW cor. Section 24-7-6, is rigging up rotary. Mid-Continent Petroleum Corp. has the rig on the ground for No. 5 Fleet, SW cor. SE SE, Section 7-5-8, Allen Pool. Gilcrease Oil Co. is building the rig for No. 1 River Bed, NW cor. Section 17-5-8 Location has been made for No. 2 River Bed, SW cor. NW NW, Section 17-5-8.

Gypsy Oil Co.'s No. 2 Harjoche, SW cor. NW, Section 10-8-6, Bowlegs Pool, made 3,012 bbls. from Wilcox sand at 4,276-4 318 feet. Magnolia Petroleum Co.'s No. 3 Hammond, SW cor. NW NE, Section 10-8-6, was completed for 431 bbls. on the swab from Wilcox sand at 4,435-4,452 feet. Pure Oil Co.'s No. 4 Strothers "F," SE cor. NE NW, Section 10-8-6, has been completed for 325 bbls on the swab, from Wilcox sand at 4,132-4,239 feet. Sinclair Oil & Gas Co.'s No. 6-A Ellen, NW cor. NE SW, Section 11-8-6, drilled to 4,410 feet, then plugged back to 3,300 feet and after drilling through the 8-inch casing was completed for 168 bbls. in a stray sand at 3,490-3,500 feet.

Gypsy Oil Co.'s No. 1 Henderson, NW cor. NE NE, Section 13-8-6, was deepened from 4,377 feet to 4,602 feet then plugged back to 4,394 feet and flowed 45 bbls. oil and is making 5,000,000 feet of gas. Continental Oil Co.'s No. 3 Cosar, NW cor. SE NW, Section 36-8-6, Little River Pool, has been completed for 620 bbls. in Wilcox sand at 4,310-31 feet. Magnolia Petroleum Co's No. 1 Dixon, SW cor. Section 31-8-7, is pumping 60 bbls. from Wilcox sand at 4,187-89 feet. Louisiana Oil Refining Corp.'s No. 2 Julwa, SE cor. SW NE, Section 7-5-8, Allen Pool, is dry and abandoned at 2,915 feet. No. 1 Hulwa, SW cor. NW, Section 8-5-8, has been abandoned at 2,970 feet.

Sequoyah County

Citizens Gas Co. has the rig up for No. 1 Humphrey, CNL SW NE, Section 33-12-27. No. 1 Greenstreet, SW cor. NE SE, Section 33-12-27, has been completed for 750,000 feet of gas in sand at 1,200-15 feet.

Stephens County

Morrison & Neal made location for No. 1 Truitt, NE cor. SW, Section 14-2-5w. Schermerhorn and others' rig is being built for No. 4 Shields, NE cor. SW, Section 13-1-4s. Magnolia Petroleum Co.'s No. 9 D. Bartley, NW cor. SW NW, Section 20-1s-8w, an old well, is being cleaned out to deepen from 2,206 feet. Carter Oil Co.'s No. 8 Glass, CNL NE SE, Section 33-1s-8w, is rigging up rotary tools. Magnolia Petroleum Co. is building the rig for No. 1 Rivire, NE cor. NW, Section 24-1s-4w. American Pipe Line Co. has the rig up for No. 1 Brown, SW cor NW, Section 7-2s-7w.

Magnolia Petroleum Co.'s No. 1 Duke, SW cor. NW NW, Section 2-1-5w, has been completed for 10 bbls. in sands at 1,185-1,200 feet. McAlester and others' No. 2 fee, SE cor. NW, Section 34-1s-8w, made 35 bbls. from sand at 1,723-27 feet. Four In One Oil Co.'s No. 1 Hanson, NW cor. Section 35-1s-8w, has been abandoned at 2,296 feet. Beard & Cobb's No. 2 Wade, SW cor. NW NE, Section 11-2s-8w, has been completed for 10 bbls. in sand at 1,502-15 feet. No. 3 Wade, NW cor SW NE, Section 11-2s-8w, is making 50 bbls. from sand at 1,508-28 feet. Magnolia Petroleum Co.'s No. 4 Webb, NW cor. SW SE, Section 3-2s-5w, has been abandoned at 2,150 feet.

Wagoner County

Commercial Development Co.'s No. 1 Kernal, NE cor. NW SW, Section 36-19-16, is dry and abandoned at 1,020 feet. Boyd & Hanks' No. 2 Pressley, SW cor. NW, Section 7-18-15, is a dry hole at 1,400 feet. A. E. Carder's No. 4 McKellopp, SE cor. NE NE, Section 25-18-15, has been abandoned at 1,580 feet. Sheldon Oil Co 's No. 1 Wilson, NW cor. SW SW, Section 1-18-17, is a dry hole at 758 feet. Peterson & Young's No. 2 Jameson, NW cor. SE NW SW, Section 23-16-16, has been completed for 1,250,000 feet of gas in sand at 900-40 feet.

GULF LED ALL PRODUCERS IN 1927 IN OKLAHOMA AND TEXAS FIELDS

The Gulf Oil Corp., through its subsidiaries, the Gulf Production Co. and the Gypsy Oil Co., was the largest producer of crude oil in Oklahoma and Texas in 1927. It produced 22,972,524 bbls. in Texas and approximately 14,409,000 bbls. in Oklahoma, a total of 37,381,524 bbls. Next to the Gulf came the Standard Oil Co. of New Jersey, through its subsidiaries, the Carter Oil Co. and the Humble Oil & Refining Co., with approximately 22,822,000 bbls. in Oklahoma and 11,123,052 bbls. in Texas, a total of 33,945,052 bbls. The approximated figures for Oklahoma are the net production given in the accompanying tables to which is added 12½ per cent royalty to arrive at a gross production figure. The production in Texas is given in gross barrels.

The Gulf Production Co. was the leading producing organization in Texas and the Carter Oil Co. led all in Oklahoma. The Yount Lee Oil Co. with a production of 14,720,228 bbls., most of which came from a few acres in the Spindletop deep horizons, was second in rank in Texas, while the Prairie Oil & Gas Co., with a gross production of approximately 14,547,000 bbls. was second in Oklahoma.

Other very large producers in Texas were the Phillips Petroleum Co., with 11,004,730 bbls. gross; The Texas Company, with 11,727,275 bbls. gross; the Magnolia Petroleum Co., with 11,855,128 bbls. gross.

In Oklahoma, the Magnolia Petroleum Co. net production was 12,930,787 bbls.; the Sinclair Oil & Gas Co.'s net, 11,965,237 bbls.; the Indian Territory Illuminating Oil Co.'s net, 10,694,835 bbls., and the Amerada Petroleum Corp.'s net, 8,336,879 bbls.

The fourth quarter production reports for Texas and Oklahoma show a number of companies that have figured less prominently or not at all in the past. For example, Mike Delaney and his associates in Gray County, Texas, are credited with a gross production of 336,087 bbls; the Danciger Oil & Refining Co. with 188,800 bbls.; Kewanee Oil & Gas Co., 131,502 bbls.; Southern Crude Oil Purchasing Co., a subsidiary of the Standard Oil Co. of Indiana, 847,050 bbls of West Texas crude. In Oklahoma, the Louisiana Oil Refining Corp., with a net of 105,067 bbls., and the Lewis Production Co., with 155,060 bbls., added to their importance among the producers of that State.

The accompanying tables give the principal producers of both states and is confined to those having had an average of 1,000 bbls. or more for the year.

GROSS PRODUCTION OF LEADING OIL COMPANIES IN TEXAS IN 1927

	First Quarter (Bbls.)	Second Quarter (Bbls.)	Third Quarter (Bbls.)	Fourth Quarter (Bbls.)	Total Gross Prod. 1927 (Bbls.)
Gulf Production Co.	5,333,582	6,195,776	5,593,843	5,849,323	22,972,524
Yount Lee Oil Co.	4,169,962	3,411,162	3,776,084	3,363,020	14,720,228
Phillips Petroleum Co.	3,189,861	2,962,760	2,660,000	2,192,109	11,004,730
The Texas Company	3,022,818	3,048,652	2,840,858	2,814,946	11,727,275
Magnolia Petroleum Co.	2,960,421	2,926,145	2,843,209	3,125,353	11,855,128
Humble Oil & Ref. Co.	2,596,457	3,017,440	2,815,955	2,693,200	11,123,052
Big Lake Oil Co.	2,018,382	1,702,783	1,665,074	1,517,869	6,904,108
Prairie Oil & Gas Co.	1,629,326	1,510,666	1,428,459	1,779,959	6,358,410
Mariand Oil Co.	1,608,526	1,386,779	974,180	1,047,009	5,016,494
Rio Bravo Oil Co.	1,579,034	833,039	773,953	783,752	3,969,778
Pure Oil Co.	984,464	925,217	956,060	862,194	3,727,935
Continental Oil Co.	925,276	873,648	750,056	673,032	3,222,012
Roxana Petroleum Corp.	698,873	765,374	902,342	1,122,990	3,489,579
Group 1 Oil Co.	727,405	649,222	564,371	461,636	2,402,634
McMan Oil & Gas Co.	578,537	470,549	336,831	332,476	1,718,393
Republic Production Co.	617,375	578,341	597,694	746,857	2,540,267
Simms Oil Co.	542,085	935,315	1,169,631	1,338,522	3,985,553
Amerada Petroleum Co.	375,886	244,105	189,983	179,190	989,164
American Refining Co.	138,779	129,393	*100,000	76,365	444,537
Atlantic Oil Prod. Co.	294,515	704,083	1,581,322	1,956,282	4,536,202
Bridwell & Heydrick	132,834	117,377	92,963	86,980	430,154
Barkley & Meadows	95,263	88,482	86,151	98,102	367,998
L. T. Burns	73,303	175,647	112,168	90,746	451,864
Cranfill & Reynolds	134,821	96,495	74,108	512,376	817,800
The California Co.	231,783	236,176	304,200	879,549	1,651,708
Church-Weekly-Fields	2,623	126,333	197,120	126,987	453,063
Crown Central Pet. Co.	110,412	90,526	86,250	79,931	367,119
Dixie Oil Co.	267,201	293,464	255,360	167,760	983,785
Dixon Creek Oil Co.	461,127	451,000	440,729	360,653	1,713,509
Derby-Haines & Williams	209,887	133,273	70,623	19,401	433,184
Echo Oil Co.	166,334	133,435	53,417	17,945	371,131
Empire Gas & Fuel Co.	584,548	435,928	419,326	313,532	1,753,334
Eastland Oil Co.	124,378	649,284	1,120,599	800,293	2,694,554
Fain-McGaha Oil Corp.	157,262	198,773	165,267	146,037	667,339
Grayburg Oil Co.	253,778	231,218	212,091	206,799	903,886
Humphrey Corp.	109,244	114,887	100,744	66,984	391,859
J. K. Hughes Dev. Co.	329,720	568,242	276,588	131,502	1,306,052
Landreth Oil Corp.	.....	66,775	994,161	1,550,958	.....
Independent Oil & Gas Co.	174,289	220,272	223,509	295,266	913,336
F. E. Kistler & Co.	211,586	122,587	96,011	57,646	487,830
Kewanee Oil & Gas Co.	61,611	84,478	.....	131,502	.....
Midwest Exploration Co.	366,835	343,768	282,216	196,082	1,188,901

McCarty Oil Co.	63,744	139,723	162,543	90,062	456,072
Mid-Kansas Oil & Gas Co.	195,955	433,223	365,677	981,600	1,976,455
Millham Corp.	135,225	136,066	124,461	108,205	503,957
J. C. Maxwell	19,392	137,569	182,733	210,801	550,485
Navarro Oil Co.	97,507	161,082	159,743	159,424	577,756
Panhandle Refining Co.	56,267	102,732	469,748	370,364	1,029,111
Pecos Oil Co.	.....	.....	493,483	425,541	.....
Petroleum Producers Co.	142,891	178,184	146,394	110,304	577,773
Rycade Oil Corp.	123,560	197,173	201,226	218,855	740,814
Roeser & Pendleton, Inc.	538,386	298,769	113,977	118,541	1,069,673
Sun Oil Co.	346,607	609,760	946,941	1,082,869	2,986,177
Skelly Oil Co.	370,825	344,982	310,132	227,578	1,253,517
Sinclair Oil & Gas Co.	502,178	371,000	337,926	298,257	1,509,361
Southern Crude Pur. Co.	16,076	67,976	272,543	847,050	1,203,647
Texas Pacific C. & O. Co.	241,261	468,631	573,890	505,023	1,788,805
Tidal Oil Co.	196,288	373,516	493,587	501,108	1,564,499
Transcontinental Oil Co.	236,627	130,068	92,911	316,046	775,652
H. F. Wilcox Oil & Gas Co.	198,329	205,012	165,793	130,452	699,586
L. H. Wentz	41,890	115,350	93,936	57,037	308,213
White Eagle O. & R. Co.	172,596	156,409	120,557	85,353	534,915

*Estimated.

NET PRODUCTION OF LEADING PRODUCING ORGANIZATIONS IN OKLAHOMA, 1927

	First Quarter (Bbls.)	Second Quarter (Bbls.)	Third Quarter (Bbls.)	Fourth Quarter (Bbls.)	Total Net Prod. 1927
Carter Oil Co.	4,140,542	6,584,558	4,932,229	4,312,222	19,969,551
Magnolia Petroleum Co.	2,405,809	3,393,555	3,758,074	3,373,349	12,930,787
Prairie Oil & Gas Co.	2,849,727	2,976,605	4,264,218	3,612,046	13,702,596
Gypsy Oil Co.	3,076,784	2,931,207	2,751,358	3,849,031	12,608,380
Amerada Petroleum Corp.	2,182,057	2,711,934	2,286,876	1,156,012	8,336,879
Sinclair Oil & Gas Co.	3,402,519	2,560,816	2,712,226	3,289,676	11,965,237
Indian Terr. Ill. Oil Co.	1,284,780	2,147,923	3,749,595	3,512,537	10,694,835
Pure Oil Co.	2,059,254	2,111,045	2,843,753	1,948,778	8,962,830
Mid-Continent Pet. Corp.	1,849,765	1,934,208	2,147,874	1,571,226	7,503,013
Comar Oil Co.	1,834,389	1,388,501	1,100,903	932,139	5,255,932
Barnsdall Oil Co.	1,445,521	1,351,310	2,440,753	2,443,885	7,681,469
Phillips Pet. Co.	1,248,166	1,207,017	1,088,716	786,811	4,330,650
The Texas Company	976,173	1,104,561	2,175,211	2,256,933	6,512,878
Tidal Osage Oil Co.	1,503,486	1,052,322	670,289	473,977	3,700,074
Roxana Pet. Corp.	884,444	1,023,841	1,629,111	1,178,068	4,715,464
T. B. Slick	777,138	381,592	285,500	383,818	1,828,048
Marland Oil Co.	678,791	942,650	917,122	593,422	3,131,985
T. B. Slick, Inc.	637,404	573,937	687,045	293,823	2,192,209
Empire Gas & Fuel Co.	306,537	856,932	1,007,509	*703,000	2,870,978
Skelly Oil Co.	526,261	577,165	974,835	730,399	2,808,660
Turman Oil Co.	194,895	541,204	170,606	142,815	1,049,520
Independent Oil & Gas Co.	679,878	541,000	1,043,962	*1,209,000	3,473,840
Kewanee Oil & Gas Co.	746,264	531,070	365,332	441,396	2,084,062
Atlantic Oil Producing Co.	432,579	490,031	757,143	610,303	2,290,056
Shaffer Oil & Refining Co.	348,864	421,000	428,390	312,972	1,511,226
Humble Oil & Refining Co.	437,466	417,189	327,635	337,653	1,519,922
Dixie Oil Co.	415,000	411,000	351,612	218,132	1,395,744
Twin State Oil Co.	238,572	371,988	837,703	987,193	2,435,456
Sunerior Oil Corp.	430,096	371,139	122,108	105,470	1,028,813
Tidal Oil Co.	401,146	345,358	683,205	731,919	2,161,628
Wentz Oil Co.	367,107	328,521	254,233	223,196	1,173,057
Mid-Kansas Oil & Gas Co.	203,197	288,110	231,496	230,215	953,018
H. F. Wilcox Oil & Gas Co.	158,261	283,668	406,624	528,281	1,376,834
Wolverine Oil Corp.	216,056	213,956	209,479	*185,000	824,491
Josey Oil Co.	302,371	198,193	183,111	183,445	866,120
Kingwood Oil Co.	87,545	197,340	177,832	220,983	683,000
Westland Oil Corp.	213,055	191,804	37,545	22,713	465,117
Transcontinental Oil Co.	250,771	188,993	124,565	112,559	676,888
Gilmer Oil Co.	37,814	168,000	136,194	92,460	434,468
Champlin Refining Co.	95,267	166,000	168,136	134,880	564,223
Continental Oil Co.	24,380	27,068	580,055	704,427	1,335,939
J. A. Hull Corp.	.....	172,319	391,117	94,893	658,329
Wirt Franklin Pet. Corp.	91,942	91,314	152,142	160,594	496,992
Denver P. & R. Co.	2,314	*85,000	157,700	123,891	368,905
Darby Petroleum Co.	1,761	72,513	109,793	228,608	412,605
Foster Pet. Corp.	256,970	160,689	127,776	395,905	941,340
Westheimer & Daube	146,249	124,245	98,665	90,752	459,911
Mispehoma Oil Co.	80,308	111,784	333,765	192,790	718,647
Devonian Oil Co.	120,904	111,145	103,409	386,103	421,561
Phillmack Oil Co.	117,814	110,000	142,157	79,909	449,880
Producers & Refiners Corp.	102,518	89,407	79,287	119,392	390,604

*Estimated.

LITTLE ROCK OFFICIALS INSPECT GAS FIELDS

By D. H. Bancroft

Staff Correspondent, Louisiana-Arkansas.

SHREVEPORT, La., Mar. 12.—Little Rock, Ark., will grant no competitive gas franchise to W. I Shuman or anyone else unless the council is given proof of the applicants' financial ability to carry out their part of the contract, according to Mayor C. E. Moyer, who, with a party of city officials and representatives of the Doherty and Arkansas Natural Gas Co. officials, toured the properties of the two interests in Arkansas and Louisiana dring the week. The tour had two objectives: On the part of the two gas companies it was to prove that they have ample gas reserves to supply Little Rock all the gas it needs now and may need in the future and facilities for distributing it to and in the city, and on the part of the city officials to attempt to locate Louisiana reserves which Shuman claimed to have when he sought a franchise in Little Rock in competition with the Little Rock Gas & Fuel Co.

The party went first along the route of the Public Utilities Corp. of Arkansas pipe line from Little Rock to the Johnson County gas fields and then to the 20,000-acre block of proven and semi-proven acreage in the Clarksville Field held by the Empire Gas & Fuel Co., which has already completed three wells having a total initial open flow of 40,000,000 feet per day and is drilling another. The wells are located about 4 miles apart. Public Utilities Corp. of Arkansas which was organized a year ago as a carrier and distributor serving gas along to a half dozen towns along the Arkansas River between the field and Little Rock, is also a Cities Service subsidiary through Natural Gas & Fuel Corp. of El Dorado. Empire Gas & Fuel Co. will be the producing agency in northwest Arkansas of the pending merger of Doherty, Benedum & Trees and Middle West Utilities gas interests in Louisiana, Arkansas and East Texas, delivering production to Public Utilities Corp.

Next, the party traveled the main line of the Arkansas Natural Gas Co. from Little Rock to Caddo Parish, Louisiana, and then went to Monroe, La. Meanwhile, the Little Rock officials had received a wire from Shuman advising that he had completed financial arrangements for his project in Washington and New York and was ready to come to Little Rock as soon as he was advised the council had taken favorable action, bringing with him General Marshall of Washington, who was to be his construction man.

KANSAS FIELDS

(Continued from Page 44)

9-27-6. Davis and others made location for No. 1 Marshall, NW cor., Section 10-27-6. Payne, McKenna and others' No. 1 Unger, NE cor. NW SW, Section 30-26-6, spudded and abandoned. Empire Oil & Refining Co.'s No. 1 Sterling, SE cor. NW SE, Section 22-27-5, was shot with 80 quarts in sand 2,712-44 feet and made 540 bbls. Blasklee & Wentz' No. 1 Henry, NW cor. SW, Section 21-27-6, an old well deepened, has been abandoned at 3,136 feet.

Cowley County

T. B. Slick's No. 2 Conrad, SW cor. NW, Section 19-32-3, is drilling at 200 feet. Foster & Deal have the rig up for No. 1 Reynolds, NW cor. NE NE, Section 4-33-7. Watchorn Oil & Gas Co.'s No. 1 Esch, C NW NW, Section 4-34-6, is spudding.

Independent Oil & Gas Co. and others' No. 1 Swenson, SW cor. NW SW SE, Section 15-32-4, has been completed for 4,500,000 feet of gas in sand 2,965-91 feet. McNabb and others' No. 1 Mattison, Lot 5, Block 44, Winfield Townsite, Section 22-32-4, has been shut in for 5,500,000 feet of gas. Watchorn Oil & Gas Co.'s No. 1 Esch, SW cor., Section 33-33-6, is good for 2,000,000 feet of gas from sand 448-50 feet. Harris & Haun's No. 1 Vickory, C NW NW, Section 17-35-3, has been completed for 1,000,000 feet of gas in sand 752-67 feet. No. 1 Bordan, C NE NE, Section 18-35-3, is making 1,500,000 feet of gas from sand 2,100-15 feet.

Elk County

Denman and others moved a machine out for No. 2 Lewis, C SE SE, Section 35-31-10. Winemiller and others' No. 1 Beatty, SW cor. NW SE, Section 30-30-11, is dry and abandoned at 1,884 feet.

Greenwood County

The Prairie Oil & Gas Co. made location for No. 1 Hughes, SE cor. NE SE, Section 26-24-12. Valley Osage Oil & Gas Co. has a machine at the location for No. 3 Roglin, CSL SW SE, Section 10-25-13.

Empire Oil & Refining Co.'s No. 19 Duby, NE cor. NW NW, Section 23-22-11, had sand 1,886-1,923 feet, shot 200 quarts and made 200 bbls. No. 3 Ott "C", SE cor. NE NE, Section 26-22-12, made 200 bbls. after a shot of 260 quarts in sand 1,673-1,735 feet.

McPherson County

Gurley & Lamar's rig is on the ground for No. 1 Paulson, SE cor. NW, Section 6-19-2w. McPherson Oil & Gas Co.'s No. 1 Anderson, C SE NE, Section 31-18-2w, is making 18,500,000 feet of gas from sand 2,915-53 feet.

Marion County

Ramsey and others moved the rig out for No. 1 Bolby, SE cor. NW NE NE, Section 22-17-4, Lost Springs Pool. Phillips Petroleum Co. has the rig on the ground for No. 4 Peterson, SE cor. SW NW, Section 23-17-4.

Harwood & Winters' No. 1 Mowrer, NW cor. SE SE SE, Section 15-17-4, Lost Springs Pool, is dry and abandoned at 2,490 feet. Phillips Petroleum Co.'s No. 1 McCoy, SE cor. NE NE, Section 22-17-4, has sand 2,366-2,433 feet and made 230 bbls.

Morris County

Franks and others' moved a machine out for No. 1 Malkins, NW cor. SE, Section 24-16-9.

Rooks County

Streeter & Stearns' No. 1 Mattison, C NW, Section 28-10-16w, is dry and abandoned at 3,625 feet.

Sumner County

Champlin Oil & Refining Co.'s No. 2 Latta "B", SE cor. SW NW, Section 9-30-2w, is drilling 2,140 feet. Roxana Petroleum Corp. made location for No. 3 Barnes, C E half SW SW, Section 14-32-2. Location was also made for No. 1 Scroggins "C", SE cor. NW SW, Section 14-32-2. Wasson and others moved the rig out for No. 8 Gassoway, C W half SE SW, Section 14-32-2. Endfield & Foster's rig is at the location for No. 1 Houston, NE cor. SW, Section 1-34-2.

Roxana Petroleum Corp.'s No. 5 Shore, SE cor. SW SE SE, Section 24-31-2, was shot with 60 quarts in sand 1,845 95 feet and made 125 bb's. No. 9 River Bed, SE cor. NE NW, Section 36-31-2, made 525 bbls. from sand 1,877-1,907 feet. No. 9 Emerich, NE cor. NW SE, Section 14-32-2, has been completed for 30 bbls. in sand 2,033-89 feet. No. 10 Emerich, NW cor. SW SW SE, Section 14-32-2, made 500 bbls. from sand 2,014-2,111 feet. No. 2 Rothwell, SW cor. NE SW, Section 14-32-2, made 1,440 bbls. after a shot of 165 quarts in sand 1,970-2,093 feet. Wasson and others' No. 4 Gassoway, SW cor. SE SW, Section 14-32-2, was completed for 680 bbls. in sand 1,953-2,085 feet. No. 5 Gassoway, NE cor. SE SE SW, Section 14-32-2, had sand 1,969-2,090 feet, shot 160 quarts and made 650 bbls. No. 6 Gassoway, NW cor. SE SW, Section 14-32-2, flowed 1,975 bbls. after a shot of 140 quarts in sand 1,971-2,090 feet. Smith & Ash's No. 1 Barnes, NW cor. NE SW, Section 23-32-2, has been abandoned at 2,192 feet.

Woodson County

Fields and others made location for No. 1 Akins, SE cor. SW, Section 19-25-14.

EXCELLENT MOVEMENT OF GULF COAST LUBRICANTS

HOUSTON, Tex., Mar. 12.—The continued excellent export movement of Gulf Coast lubricating oils the past week with several additional bulk cargoes to be filled during the latter part of this month and April has resulted in a generally healthy market structure here. This also has been reflected in an increasing demand for bunker oils and with cheaper materials from outside sources being eliminated a stronger tone is apparent in fuels.

The stronger lub market Monday was enabling sellers in getting top prices from domestic buyers on nearly all products. Although sellers have made no general advances in their quoted prices, which have been in effect for the past two months, there was very little tendency Monday to move oils under the "quoted" market. As a result the moving market is from a quarter to a half cent higher than a week ago.

Due to the approaching warm weather, the principal strengthening is in the higher viscosity oils as buyers generally are placing orders now for later spring and some summer business.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 38)

Eslick et al's No. 1 Mrs. J. A. Hopkins, NW cor. W 30 acres of SW ¼, Sur. 84, H.&T.C., Blk. B-2 ..... Set 12½-in. csg., 510 ft; drlg., 1,840 ft.

Gibson Oil Corp.'s No. 3 J. B. Bowers, 1,650 ft. from E line and 990 feet from S line, E half, Sec. 92, Blk. B-2 ..... Struck gas, 2,925 ft; rig burned.

Gibson Oil Corp.'s No. 9 J. B. Bowers, NE cor. Sec. 92, Blk. B-2, H.&G.W. Sur. ..... Drlg., 2,600 ft.

Gibson Oil Co.'s No. 1 G. Pierce, SE cor. Sec. 149, Blk. B-2, H.&G.N. Sur. ..... Cellar.

Gulf Prod. Co.'s No. 4 J. B. Bowers, SE SW SW, Gulf lease in Sec. 89, Blk. B-2 ..... Drlg. lime, 2,525 ft; show gas, 2,520 ft.

Gulf Prod. Co.'s No. 5 J. B. Bowers, SW SE SW, Gulf lease in Sec. 89, Blk. B-2 ..... Set 15½-in., 528 ft; drlg. lime, 2,650 ft.

Gulf's No. 2 Holmes, SE cor. NE, Sec. 107, Blk. 3, I. &G.N. Sur. ..... 25,000,000 ft. gas, 2,870-80 ft; set 6-in. csg., 2,925 ft; top pay, 2,928 ft; T.D., 3,119 ft; flowing 312 bbls. daily.

Gulf Prod. Co.'s No. 1 M. Davidson-A, 330 ft. from S. and E lines of NW cor. E half NW, Sec. 87, Blk. B-2, H.&G.N. Sur. ..... 5,000,000 ft. gas, 2,790-2,800 ft; cmtd. 6-in. csg., 2,925 ft; drlg. G.W., 2,933 ft.

Gurnsey Oil Co.'s No. 2 B. E. McKinney, Sec. 162, Blk. 3, I.&G.N. Sur. ..... Show oil, 3,025-30 ft; fish., 3,034 ft.

Hardendorf Drlg. Co.'s No. 1 G. A. Henderson, NE E half NE, Sec. 47, Blk. 25, H.&G.N. Sur. ..... Run. 10-in. csg., 590 ft; S.D.

Hickory O. & G. Co.'s No. 1 Lester, SE cor. NE NW, Sec. 1, Blk. 1, A.C.H.&B. Sur. ..... Location.

Lefors Pet. Co.'s No. 2 J. M. Shaw, NW cor. T. Leach Sur. — Location.
McAuley et al's No. 1 Morse, SE cor. N half, Sec. 3, Blk. 26, H.&G.N. Sur. — Drlg., 1,760 ft.
McElroy Oil Co.'s No. 1 M. B. Davis, NE cor. S 240 acres of E half, Sec. 12, Blk. 1, A.C.H.&B. Sur. — Location.
Majestic Oil Co.'s No. 4 J. B. Bowers, SW cor. E half, Sec. 92, Blk. B-2 — Drlg., 2,470 ft.
Majestic Oil Co.'s No. 6 J. B. Bowers, Sec. 89, Blk. 2-B — Drlg., 3,840 ft; S.O., 3,700 ft.
Magnolia Pet. Co.'s No. 1 J. Bowers — Made 400 bbls. daily from G.W., 2,853-55 ft; C.O., 2,890 ft.
Magnolia Pet. Co.'s No. 1 J. J. Wall, NE cor. Sec. 162, Blk. 3, I.&G.N. Sur. — S.O.&S.G., 3,190-3,202 ft; show oil, 3,335 ft; swb. 8 bbls. per hr., 3,-335-53 ft., 4% b.s. and wtr.
Midwest Explin. Co.'s No. 1 L. Holmes, Sec. 86, Blk. 3, I.&G.N. Sur. — Show 43 grav. oil in G.W., 3,110-12 ft; cmt. 8-in., 3,015 ft; swbd. 58 bbls. in 6 hrs., 3,135-36 ft; swbd. 121 bbls. 24 hrs., 3,135-3,251 ft; C.O., 3,258 ft.
Operators Oil Co.'s No. 2 W. Jackson, NW cor. N ½ NE, Sec. 88, Blk. B-2 — Drlg., 2,456 ft.
Osborn et al's No. 1 E. E. Barrett, SE cor. NE, Sec. 111, Blk. 3, I.&G.N. Sur. — Rig.
Osborne et al's No. 1 J. S. Morse, SW cor. SE, Sec. 1, Blk. 26, H.&G.N. Sur. — Location.
J. T. Parks' No. 1 N. H. Reed, NE cor. W 23 acres, N half, Sec. 1, H.&G.N. Sur. — Location.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3 — 700 ft. wtr., 3,430 ft; S.D., 3,422 ft.
Phillips Pet. Co.'s No. 1 Davidson (Myson) — Cmt. 8¼-in., 2,920 ft.
Phillips Pet. Co.'s No. 2 Davidson (Myson), NE cor. NW NW, Sec. 87, Blk. B-2, H.&G.N. Sur. — Drlg., 1,935 ft.
Phillips Pet. Co.'s No. 3 W. Jackson — Show gas, 2,572-2,600 ft; cmt. 3-in. csg., 2,834 ft; C.O., 2,860 ft; T.D., 2,873 ft.
Phillips Pet. Co.'s No. 3 Jackson-Riley, Sec. 88, Blk. B-2, H.&G.N. Sur. — Recmntd. 12½-in., 1,027 ft; 6,-000,000 ft. gas, 2,590-2,635 ft; cmt., 8¼-in. csg., 2,857 ft.
Phillips Pet. Co.'s No. 4 Jackson-Riley, SE cor. W half SW, Sec. 88, Blk. B-2 — Drlg., 365 ft.
Plains Drlg. Co. and Ray's No. 1 A. Chapman, NW SW NW, Sec. 50, Blk. 9-9, H.&G.N. Sur. — Location.
Plains Drlg. Co.'s No. 2 A. Davis, 990 ft. N. and 330 ft. W. SE, Sec. 24, J. Davidson Sur. — Location.
Purple Sage Oil Co.'s No. 2 E. B. Johnson — 2,000,000 ft. gas; drlg., 2,320 ft.
Ray & Massie's No. 1 A. Chapman, NE NW SW, Sec. 51, Blk. 25 — Show oil, 2,679-90 ft; T.D., 2,776 ft; 400 ft. oil in hole.
Rensaul Pet. Co.'s No. 2 M. Huselby, NE cor. SW, Sec. 55, Blk. 25, H.&G.N. Sur. — T.L., 1,675 ft; set 8¼-in., 1,851 ft; 2,000,000 ft. gas, 2,185-2,205 ft; 2,576 ft., T.D.
Scott & Travis' No. 1 A. Chapman, 990 ft. N and W of SE cor. N half SW, Sec. 70, Blk. 25, H.&G.N. Sur. — Location.
St. Clair Oil Co.'s No. 1 C. H. Rowe — Spud. and S.D.
St. Clair Oil Co.'s No. 1 L. S. Stocklon, SE cor. Sec. 35, W. R. Lee Sur. — Spudded and S.D.
Shamrock Oil Co.'s No. 1 Chapman, NE E half SW, Sec. 50, Blk. 25 — 10,000,000 ft. gas, 2,695-2,715 ft; spraying 50 bbls., 2,763-73 ft; T. D., 2,785 ft.
Skelly Oil Co.'s No. 1 Bradford, NE cor. Sec. 118, Blk. B-2, H.&G.N. Sur. — 12,000,000 ft. gas, 2,765 ft; S.D., 2,775 ft.
Spartan Oil Co.'s No. 1 J. Hopkins — Drlg., 1,075 ft.
Sullivan et al's No. 1 A. Chapman-A — 23,000,000 ft. gas, 2,280-2,300 ft; S.O., 2,345-50 ft; drlg., 2,848 ft.
Sullivan et al's No. 1 S. A. Cobb, NE cor. NW, Sec. 64, Blk. 25, H.&G.N. Sur. — Rig.
Sullivan Oil Co. et al's No. 1 M. Huselby, NW cor. E half NW, Sec. 55, Blk. 25, H.&G.N. Sur. — Location.
Sun Oil Co.'s No. 1 Jackson — Top lime, 2,035 ft; to rerun 6-in. 2,950 ft.
Staggers Oil Co.'s (was Ruby Oil Co.'s) No. 1 B. F. Tally — T.D., 635 ft; S.D.
The Texas Co.'s No. 2 J. B. Bowers — Show gas, 2,810 ft; show oil, 2-820 ft; S.D., 3,206 ft. to plug back for gas.
The Texas Co.'s No. 3 J. B. Bowers — Fish., 2,765 ft; 44,000,000 ft. gas.
The Texas Co.'s No. 4 J. B. Bowers, SE cor. SE, Sec. 93, Blk. B-2 — Cmtd. 8¼-in. csg., 2,108 ft; drlg., 2,710 ft.
The Texas Co.'s No. 2 H. M. Davis, SW cor. NW, Sec. 86, Blk. 3 — Set 8¼-in., 2,150 ft; cmt. 6-in., 3,050 ft; 1,500 ft. oil; T.D., 3,-145 ft.
The Texas Co.'s No. 1 M. B. Davis, SE cor. NE, Sec. 8, Blk. 1, A.C.H.&B. Sur. — Set 12½-in., 706 ft.
The Texas Co.'s No. 1 S. McLarty-A, SW cor. E ½ NW, Sec. 1, Blk. 1, A.C.H.&B. Sur. — Making 40,000,000 ft. gas; spraying 80 bbls. oil daily, 2,410 ft.; may D.D.
The Texas Co.'s No. 1 S. McLarty — T.L., 1,712 ft; cmt. 6-in. csg., 2,-525 ft.
The Texas Co.'s No. 1 C. Thut, C N half of E 320 A, Sec. 1, H.&G.N. Sur. — 10,000,000 ft. gas, 2,436-40 ft; making 1 bailer 42 grav. oil per hr., 2,806-15 ft; T.D., 2,942 ft.
The Texas Co.'s No. 2-A Chapman, NE cor. NW NW, Sec. 51, Blk. 25, H.&G.N. Sur. — Drlg., 2,295 ft.
The Texas Co.'s No. 2 Chapman-B, Sec. 31, Blk. 25, H.&G.N. Sur. — Rig.
The Texas Co.'s No. 1 J. E. Williams, NW cor. NE NW, Sec. 7, Blk. 1, A.C.H.&B. Sur. — Building rig.
Tobias Oil Corp.'s No. 1 W. H. Taylor, C NE, Sec. 10, Blk. B-2 (formerly Smallwood et al's) — Rig burned; 835 ft; rebldg.
Viola Oil Corp.'s No. 1 G. H. Saunders — Drlg., 1,075 ft.

HALE COUNTY

Bailey & Young's No. 1 Thomas, Sec. 1, Blk. J.K.L. — S.D., 175 ft.
Donnell Pet. Co.'s No. 2 Mullican, NW cor. Sec. 66, Blk. A-3, I.&S.B. Sur. — Top pay in sandy shale, 495 ft; ½ bailer oil and 3 bailers wtr. per day; S.D., 620 ft.
Donnell Pet. Co.'s No. 1 Mullican, C Sec. 21, Blk. B, R. M. Thompson Sur. — 200 ft. fluid in hole from 407-14 ft; S.D.
Explin. Co.'s No. 1 Crawford, C NE, Sec. 17, Blk. C-3, T.T.R.R. Sur. — Spudded and S.D.
Explin. Co.'s No. 1 Goodman — S.D., 350 ft.
A. S. Mimm's No. 1 W. A. Ritcher, 700 ft. from east line and 1,200 feet from south line, Sec. 17, Blk. X, John Glynn Sur. — S.D., 1,140 ft.
Tolbert & Simms' (was Gouldy & Stone's) No. 1 Kitteral, SE cor. NW, Sec. 65, Blk. A-3, G.C.&S.F. Sur. — S.D., 485 ft.

HALL COUNTY

Briscoe Oil Assn's (was Seifert et al's) No. 1 Owens, C NE, Sec. 179, Blk. S-5, Dennison & Pacific Sur. — Spudded and S.D.

HANSFORD COUNTY

Caldwell et al's No. 1 J. Adriance est. — S.D., 1,020 ft. (corrected depth).
Oklavania et al's No. 1 Coots, Sec. 13, Blk. 45, H.&T.C. Sur. — Cmt. 10-in. csg., 990 ft; drlg., 1,-710 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood — S.D., 1,455 to install rotary.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9 — Preparing to abd., 4,038 ft.
J. E. McKanna's No. 1 Francis Farwell — C.O., 3,501 ft; to drill deeper; abd., 10-20-27; at 3,591 ft; salt wtr., 3,598-3,620 ft; drlg., 3,630 ft.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 — Spudded and S.D.
Hoover et al's No. 1 fee, J. S. Hood Sur. — 300 ft. wtr. in hole; S.D., 5,060 ft; rainbow show.

HUTCHINSON COUNTY

Alamoso Oil Co.'s No. 2 J. M. Sanford, Sec. 83, Blk. 46, H.&T.C. Sur. — Spudding.
R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 — Rig.
Barnum & Delmar's No. 1 Johnson Bros., NW cor. E half, NW, Sec. 37, Blk. Y, A.&B. Sur. — Location.
Beam et al's No. 1 Cockrell, Sec. 3, Blk. 23 — S.D., 405 ft. for orders.
Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y — S.D., 750 ft.
Conklin et al's No. 1 Johnson, Sec. 1, Blk. X03, H.&O. B. Sur. — S.D., 600 ft.
Dixon Creek Oil Co.'s No. 1 Burnett est., NW cor. of E 240 A of N 320 A, Sec. 120, Blk. 5, I.&G.N. Sur. — Run. 15-in., 450 ft; drlg., 2,770 ft.
Harris et al's No. 1 J. Q. Best, Sec. 10, Blk. Y-2, T.T. R.R. Sur. — S.D., 1,915 ft. (corrected).
Holmes & Quinn's No. 1 J. K. Quinn, SW cor. Sec. 9, Blk. 3, B.S.&F. Sur. — U.R. 8-in. csg., 2,144 ft.
McMan O. & G. Co.'s No. 1 Albert Yake, SW cor. SE, Sec. 2, Blk. J, H.&G.N. Sur. — Set 8¼-in. pipe, 2,107 ft. Show gas 2,220 ft; 10,000,000 ft. gas; spraying 10 bbls. daily, 3,990-92 ft; T.D., 3,012 ft; swb. 5 bbls. and 200 to 500 bbls. salt water; to abandon.
Phillips Pet. Co.'s No. 2 Garland, Sec. 77, Blk. 46 — Rig.
Phillips Pet. Co.'s No. 12 Elva-Whittenburg, E. Tomlinson Sur. — T.A., 4,445 ft.
Phillips Pet. Co.'s No. 2 Chap, NE cor. E 80 acres of the S 160 acres of Sec. 73, Blk. 46 — Rig.
Phillips Pet. Co.'s No. 2 Land, NW cor. of E 40 acres, N 80 acres of S 320 acres, Sec. 83, Blk. 46 — Rig.
Phillips Pet. Co.'s No. 1 Perkins-Hamilton, SW cor. of N 240 acres of S half, Sec. 22, Blk. 47, H.&T.C. Sur. — Location.
Skelly Oil Co.'s No. 2 Armstrong & Byrd — Set 12-in. csg., 1,425 ft.
Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson — 800 ft. oil in hole from 3,146 ft; drilled to 3,130 ft; shot with 40 qts., 3,125-60 ft; bridged; no increase in oil after deepening; pumped 25 bbls. in 5 hrs; C.O.
Timms & Dietsch's No. 1 C. R. Garner, NE cor. W 80 of SE, Sec. 124, Blk. 4, I.&G.N. Sur. — Location.
Wendell et al's No. 1 Johnson Bros. — S.D., 1,050 ft.

KING COUNTY

Humble O. & R. Co.'s No. 1 Pitchfork, Sec. 171, Blk. A-96, John H. Gibson Sur. — Hole full wtr., 3,375 ft; U.R. 6-in. csg., 3,725 ft.
J. L. Pattison's No. 1 Patton — Slight show gas, 2,115-30 ft; fish. 3,410 ft.

LAMB COUNTY

Dan Freel et al's No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. — Spudded and S.D.
Spade Oil Co.'s No. 1 Andrews, 1,085 ft. from N. line and 200 ft. from E line, Labor 23, League 643, (5 miles NE of Littlefield) — Spud and S.D.
Tolbert & Simms' No. 1 Ellwood, NE SW SW, Sec. 14, Blk. B, R. M. Thompson Sur. — 712 ft; small show oil and hole full wtr.; dry, 1,504 ft; temp. abd.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE, Sec. 399, Blk. 43, H.&T.C. Sur. — Spudded and S.D.
Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 — S.D., 2,000 ft.
McCorkle's No. 1 A. Barton, NE cor. SW SE, Sec. 504, Blk. 43, H.&T.C. Sur. — Wtr. in lime, 4,126-40 ft; 6-in. set 4,155 ft; 5 3/16-in. csg. set, 4,-420 ft; S.D., 4,705 ft.
Ozark Drlg. Co.'s No. 1 Frass, NE SE, Sec. 106, Blk. 10, H.&T.C. Sur. — Rig on ground.
Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 — Show oil, 3,520 ft; S.W., 3,900 ft; 6-in. csg., 4,380 ft; S.D., 4,380 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles ranch — Small show oil, 1,133-40 ft. in sand; S.D., 2,730 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Thompson-Amarillo, C Sec. 22, Blk. 26, E.L.&R.R. Sur. — Drlg., 1,000 ft.
Amarillo Oil Co.'s No. 1 J. T. Sneed, Jr., C W 640 acres, Horace Hall Sur. — Location.
Amarillo Oil Co.'s No. 1 D. P. Seay, Cen. Sur. 85, G.&M. Sur. — Location.
Amarillo Oil Co.'s No. 1 L. H. Crawford, C SE, Sec. 26, Blk. P. M., E.L.R.R. Sur. — Location.
Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21 — T.D., 3,520 ft; cmntd. 10-in. csg. 2,636 ft; fish., 2,636 ft.

MOTLEY COUNTY

Explin. Co.'s No. 1 Burleson — Spudded and S.D.
Explin. Co.'s No. 1 Tillson — S.D., 750 ft. for repairs.
Explin. Co.'s No. 1 Matador Land & Cattle Co., C SW, Sec. 37, John Gibson Sur. — S.D., 1,002 ft.
Matador Oil Corp.'s (formerly Wheeler et al's) No. 1 C. D. Bird, SW cor. NW, Sec. 4, Blk. S, Stephens Sur. — Drlg., 500 ft.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landegrin, SE cor. NE SW, Sec. 46, League 310, Capital land — 1,900 ft. wtr., 4,085-93 ft; 1 bailer wtr. per hr. and light scum oil, 4,527 ft. (steel line meas.); cmt. 6-in., 4,443 ft; 3,000 ft. S.W., 4,850-56 ft; T.D., 5,645 ft; fish for csg.

OCHILTREE COUNTY

W. G. Burton's No. 1 Strickler — Drlg., 4,003 ft.
Hamilton et al's H. E. Wamble — S.D., 250 ft.
McCorkle P. L. Co.'s No. 1 R. H. Moore — S.D., 1,600 ft.
Montgomery's No. 1 Weinett — S.D., 850 ft.
Standard Development Co.'s No. 1 Bowen — S.D., 900 ft.

POTTER COUNTY

Amarillo Oil Co.'s No. 1 Masterson-K, C SW, Sec. 85, Blk. O-18, D.&P.R.R. Sur. — Recmntg. 12½-in. csg., 1,000 ft; show gas, 1,650 ft; drlg., 2,000 ft.
Amarillo Oil Co.'s No. 1 Fuqua, C NW, Sec. 18, Blk. 6, B.S.&F. Sur. — Drlg., 590 ft.
Amarillo Oil Co.'s No. 1 Lee Bivins-B, C NW, Sec. 27, Blk. O-18, D.&P.R.R. Sur. — Cellar.
El Rio Oil Co.'s No. 1 River Bed, 530 ft. N and 670 ft. W of NE cor. Sec. 106, Blk. 46, H.&T.C. Sur. and in Canadian River Bed — Drlg., 420 ft.
Frank Allen et al's No. 1 W. H. Bush — S.D., 410 ft; corrected T.D.

RANDALL COUNTY

Westbrook Oil Co.'s No. 1 J. Beckman, SW cor. SE NE, Sec. 46, Blk. B-5 — S.D. for orders, 3,712 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A — Show gas, 4,990 ft; show oil, 4,992 ft; csg. set, 4,992 ft; T.D. 5,153 ft; set 3-in., 5,155 ft; S.D. 5,240 ft.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B — 100,000 ft. gas, 2,016-26 ft; T.D. 3,353 ft; 2,000 ft. S.W., 3,326-33 ft; S.D., 3,410 ft.

SWISHER COUNTY

Adams & Pritchard's No. 1 Crawford, Sec. 39, Blk. W-1, T.T.R.R. Sur. — Run. 6-in., 350 ft.

WHEELER COUNTY

Byrens et al's No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H.&G.N. Sur. — U.R. 10-in. csg., 825 ft. and S.D.
Clark et al's No. 1 J. D. Purcell, C NW SW, Sec. 51, Blk. H.&G.N. Sur. — Spud.
Lone Star Gas Co.'s No. 1 C. George, C SE SE, Sec. 88, Blk. 17, H.&G.N. Sur. — Location.
Rook et al's (was Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. — T.L., 3,040 ft; drlg., 3,050 ft.
Rook & Angus' No. 1 Smock (Linkey) C SE SE, Sec. 5, Blk. 24, H.&G.N. Sur. — Drlg., 2,047 ft.
Sabine Oil Co.'s No. 1 E. L. Woodley, C SE SE, Sec. 21, Blk. 24, H.&G.N. — Spud.
Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. — S.D., 2,120 ft. for orders.
Sun Oil Co.'s No. 1 G. Krc., C NW NW, Sec. 127, Blk. 23 — U.R. 8¼-in. csg., 1,350 ft.
Vaughan et al's No. 1 M. Ackley — Location.
H. Vaughan et al's No. 1 C. C. George, C SE NW, Sec. 96, Blk. 17, H.&G.N. Sur. — Drlg., 1,715 ft.
Vaughn et al's No. 1 B. Woodley, C SW NW, Sec. 21, Blk. 24, H.&G.N. Sur. — Location.
Vaughn et al's No. 1 A. Wood, C NW SW, Sec. 21, Blk. 24, H.&G.N. Sur. — Location.
Vaughn et al's No. 1-B Ackley, C NE NW, Sec. 4, Blk. 37, H.&G.N. Sur. — Building rig.
Kaufold et al's No. 1 E. R. Wallace — Driving pipe, 300 ft.
Woodtex Oil Co.'s No. 2 C. A. Linkey — Drlg., 2,160 ft; G. W.
Pete Woodley's No. 1 J. Boyle — Run. 8¼-in., 1,500 ft.

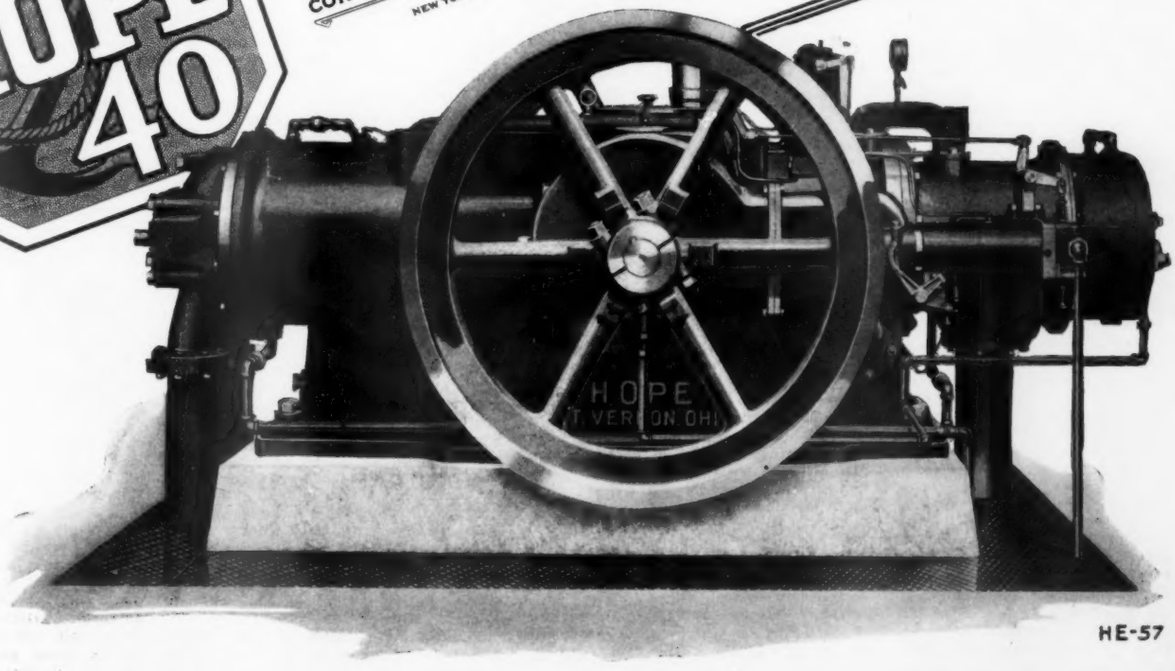
Why need a Crank Shaft Slop Around in it's Bearings?

It need not—it will not—it cannot—in the Hope "40" Horizontal Gas Booster. Twin Timken Roller Bearings—two each side of the crank—practically do away with friction. And it is friction which wears away ordinary bearings, causes looseness, destroys alignment, and leads to early failure. The Hope "40" is built to stand up—do the work month after month, with the least attention.

Write for new Bulletin 401.

HOPE ENGINEERING AND SUPPLY COMPANY
MOUNT VERNON, OHIO, U.S.A.
NEW YORK, N.Y. DALLAS, TEX. TULSA, OKLA. CASPER, WYO.
ENGINEERS CONTRACTORS
DESIGNERS MANUFACTURERS

The HOPE 40



HE-57

GROWING LOAD OF TAXATION A HANDICAP

(Continued from Page 32)

pressure constant, Smith would not need to depress the price to get the necessary funds to meet his payroll.

In Periods of Overproduction

While it is true there are no such things as absolute economic laws and only economic tendencies, I do not believe that there can be any question that during periods of distress occasioned by overproduction, the oil industry must pay out of its profits, in whole or in part, tax burdens which amount to an appreciable amount, say 25 per cent, of the factory selling price of the commodity.

While there is a hopeful rift in the clouds, so far as the gas tax is concerned, by the decision of the Illinois Supreme Court declaring the Illinois Act unconstitutional, public financiers and legislatures will not be so much concerned with the rate of tax as its constitutionality and they will bend their efforts to draft constitutional laws rather than reduce the rates. I do not see any hope that they will stop short of a 4 or 5-cent tax.

As illustrative of the legislative trend, a bill was introduced into the special session of the Wisconsin Legislature this winter and given serious consideration, to increase the tax from 2 to 5 cents, an additional tax of 3 cents to be devoted to the maintenance of the higher educational institutions of the State. This idea is gaining ground and I look to see the next three or four years bring determined efforts by states to secure revenue to defray the general expenses of the State and its political subdivisions through increases in the gasoline tax.

There will be a general and determined attempt by the next legislative bodies in the Middle West to tax out of existence, so-called chain stores. This legislation is not aimed primarily at oil companies, but so far no constitutional law has been devised which will reach the chain stores and not the oil companies. A $400 or $500 annual tax on each pump, service station, and bulk station, will spell confiscation for a large percentage of the merchandising openings of the industry.

Growth of State Regulation

State regulation of trucks and their excessive taxation is another menace. In fact State regulation of the Industry itself is finding a great deal of popular favor owing to uneven prices, waste in production, multiplicity of the equipment of distribution, and the general belief that money is obtained in the oil industry much the same as it is obtained from the diamond mines of South Africa.

Taxation and legislation are expensive and menacing problems but to talk about them will do little good unless we can translate ideas into action. I think there is an ever increasing realization of the importance of these two subjects. While it is true that the Standard Oil Co. of Indiana has given careful attention for many years to these problems, it is evident that no one company or half dozen oil companies can protect the interests of all.

We must have united action and to have united action we must forget that we are business rivals and get together and plan ways and means of action.

I do not contemplate, and I do not believe that any one of the industry contemplates, asking for immunities or privileges. We only ask that we be accorded the same rights and privileges that are accorded other lines of business in the business world; that our tax burdens be not greater, or at least not much greater, than that of other great lines of business. What we need is organization to protect ourselves from aggression.

Two years ago when there were a number of very unfair and stringent, and I might say, vicious measures pending in a number of legislatures in the Middle West, I sent out a considerable number of letters to other lines of industry interested in these measures and the response to the S.O.S. was gratifying. Most of them wanted to know what they could do to help and when given jobs they were not only willing but anxious to help.

Need for Contact

It was suggested to me by the financial head of a great chain store company that we ought to have a point of contact, a clearing house, where all interested in legislation could obtain information and ask for help. This idea has gained a great deal of support among oil people and I hope that we may, in the not distant future, realize its accomplishment. It is a generally accepted proposition that we ought to have an office in charge of a competent and experienced man with whatever staff is necessary; first, to compile data concerning taxation and legislation which would be available to anyone who desired to secure it; second, a place where anyone in distress could go and where assistance would be rendered by all those affected by the contemplated tax or legislation. Such a clearing house or bureau is not new and is not illegal, and is being operated by many business associations today.

In the field of property taxation alone, hundreds of thousands of dollars could be saved if the industry generally had some definite notion of what ratio of assessed to actual value is being used in different communities for the valuation and assessment of property generally. With such information no oil company would file its property at a ratio three or four times as great as that which prevailed in that taxing jurisdiction.

In the matter of rendering State reports and income tax returns, such a bureau in many ways could be useful and financially profitable.

Some one of the great national organizations already in existence in the industry should take up the burden of the establishment of such a bureau. If none of them see fit to do this, then it will have to be organized independently and supported by memberships and contributions.

If out of the disastrous year of 1927 and the threatened disastrous year of 1928 there emerges mutual co-operation for mutual benefit and profit, and adversity will not have come in vain and we can then sing with the poet "sweet are the uses of adversity."

Exchange National Elects H. H. Rogers To Succeed McGraw

Harry H. Rogers, president of the Exchange Trust Co. of Tulsa, has been elected president of the Exchange National Bank of the same city to succeed the late James J. McGraw.

Mr. Rogers has been a director in the Exchange National Bank for 10 years.

W. A. Brownlee, vice president, has been advanced to executive vice president, and Joseph McGraw, son of the late J. J. McGraw, will succeed his father on the bank's board of directors.

Harry H. Rogers is one of the best-known financiers in the Southwest, a practical oil producer and a lawyer of high attainments. He has been a member of the board of directors of the Exchange National Bank for 10 years. Because his wife's health necessitated a change of climate, Mr. Rogers moved to San Antonio in 1920, and during his residence there became one of the industrial and financial leader of that part of Texas, but at all times was in close touch with developments in oil and other industries in Oklahoma. Many business men in Tulsa predicted his election to succeed Mr. McGraw, crediting him with all the qualifications needed as the head of a large banking institution.

W. A. Brownlee, executive vice president, came to the Exchange National Bank from the Planters National Bank when it was absorbed by the Exchange. Mr. Brownlee was cashier of the Planters bank. He rose rapidly in the service of the larger institution and is recognized as one of Oklahoma's most efficient financiers.

Joseph McGraw, who succeeds his father on the board of directors, is a graduate of the University of Oklahoma and a practical oil man.

SORRENTO DOME IS NOTABLE ACHIEVEMENT

(Continued from Page 33)

from the lumber camp at Sorrento, to serve as tracks for the trucks carrying their instruments. The pioneer trucks backed into the swamps, laying down the planks as they went, until the roadway had been completed the 2½ miles to the clearing on the small spot of high ground where once had been the site of the saw mill and logging camp.

There was a scene of desolation. The old saw mill had burned to the ground years before, leaving only a few concrete foundation corners as markers of the past. The old two-story frame commissary house stood unpainted and dilapidated. A great excavation, destined later to be put into emergency service as an earthen oil reservoir, indicated where once had been the mill and log pond.

The old saw mill pond has turned out to be one of the most important preparations made for the coming of the Gulf because when the discovery well came in the middle of February flowing at an estimated rate of better than 4,000 bbls. daily there was no place to run the oil except in this pit. Up to the time this is written, the well has flowed steadily into this pit, which is estimated to have accumulated between 40,000 and 50,000 bbls of oil and which engineers figure will hold double that amount. The pit roughly is 500 feet long and about 100 feet wide at the widest point.

The old lumber camp commissary turned into a boarding and bunk house for the Gulf Refining Co. The Gulf's men at the field are shown resting during the noon hour. This is the one spot of high ground in the swamp.

Locations Water Covered

The Gulf Refining Co. also quickly made use of the old lumber camp commissary house, outfitting it as a boarding and bunk house and as an office for development operations. From here the "shooting" crews centered their operations, working over a swamp land territory of around 45,000 acres, and then outlining what they believed to be the dome, the top of it lying more than one-half mile away and further into the swamps.

The shooting crews departed and their places soon were taken over by the engineers and the drillers. A location was made for the first test about 2,000 feet north of the camp. To get to the location, another plank road had to be cut and built in order not only for the men to get back and forth but also that derrick timbers and machinery might be hauled.

Again the trucks had to be backed into the water-soaked jungle, laying heavy timbers lengthways ahead and covering them crossways with 4 by 12-inch planks. This made the roadway to the location where additional wider planking was laid to permit turning of trucks.

The locations of all tests so far drilled have been on land entirely covered with water with the mulk so soft that it would hardly sustain the weight of the board roadway with trucks. Lake Pontchartrain, only from 25 to 30 miles distant, backs up all over this country for miles and miles with the rise and fall of the tides. Water from 1 foot to waist deep is everywhere, sometimes rising over a foot deeper with the incoming tide.

Although only 7 miles from the Mississippi River and in lowland, the field was not in the flood district, being on the east side of the river. The flood swept all the country on the opposite side of the river but levies guarding the east side held firmly with the valiant efforts of the workers. Some backwater came up part way to the field but with the usual tidewater this was hardly an additional inconvenience.

Drinking Water a Problem

Since the starting of the first test last June nearly 3,000 feet of plank roadway has had to be built to the various additional tests drilled, all the roadways having been cut through a dense underbrush. To drill more tests, the Gulf will have to lay still more plank roadway, these roads being built only as fast as new locations are made.

So far five tests have been drilled. No. 1 was abandoned after a blow-out; No. 2, 200 feet southeast, was dry; No. 3, 1,000 feet north of No. 1, was dry; No. 4, 600 feet west of No. 1, was the discovery well; while No. 5 has casing cemented for a test which probably will have been made before this is in print. All are on property owned by the United Land Co.

Although there is water, water everywhere, there is not a drop to drink in all this swamp, and to quench the thirst of these crews, the Gulf Refining Co. has had to ship water in kegs all the way from New Orleans to McElroy and then truck it into the swamps for the men. With the difficulty of transportation, this has been one of the biggest nuisances yet felt by the company.

However, only drinking water need be hauled as there is a flowing salt water well at camp which provides a continuous supply of water for cleaning purposes. The camp itself is kept in the most sanitary condition and cleanliness prevails in the cooking and handling of all food supplies, three men in addition to a cook being kept busy full time looking after this end.

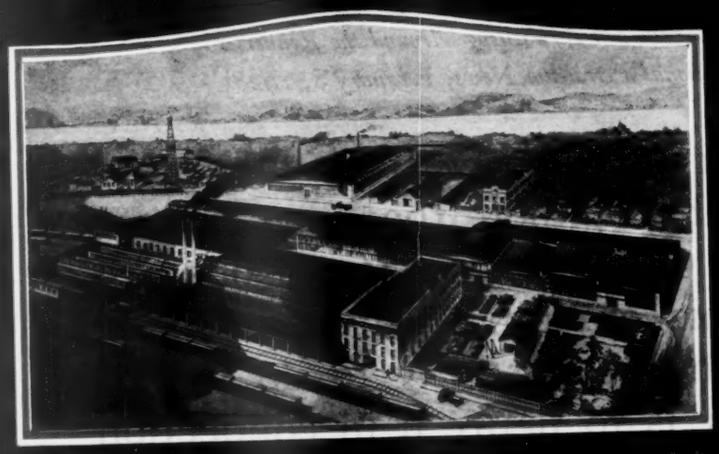
The country is infested with reptiles of all descriptions but in contrast to this it is a haven for any hunting instincts of those at the camp who desire recreation along this line. One of the prize pictures at the camp is one of a large deer, which invaded the camp and was killed with a jack knife in the hands of one of the men.

In this article, the writer has attempted to picture the country in which the Gulf Refining Co. has chosen to open an oil field, together with some of the pioneering efforts of this company. In an ensuing article, the development of the field itself will be told, narrating some of the many advantages of the field's location in contrast with the problems the Gulf has had to solve in getting into the district.

Parkersburg

HAS SERVED THE OIL FIELDS OF THE WORLD FOR THIRTY ONE YEARS

1897-1928



A NOTHER page in the history of The [illegible] Rig & Reel Company is in the making. For thirty-one years this company has grown with the industry it serves—continuing to expand its facilities and capacities for quality production.

It does not presume to rest prestige [illegible] but owes its own prestige to the Customers [illegible]

Comprising an organization of hundreds of [illegible] ces, engaged in the manufacturing, selling [illegible] of Parkersburg products throughout the oil [illegible] entire world, it is pledged to consistently [illegible] high standard of Parkersburg Quality and [illegible]

The sphinx and [illegible] Parkersburg [illegible] are [illegible] [illegible]

The PARKERSBURG RIG & REEL COMPANY

How to Figure Cracking Costs

[*From Paul Truesdell's "Visiting Around the Refineries" in the National Petroleum News, February 8, 1928*]

"A refiner I talked with the other day expressed the opinion that any refiner who tries to figure by itself cost of operating his cracking plant, is fooling himself. The proper way to do it, this man thinks, is to figure it in connection with the skimming part of his plant.

"He says:

'If you charge to your skimming equipment the crude at the market price and credit to it at the market the gasoline and other products it produces, you will find the cost of your gasoline has been pretty high. Then take your cracking equipment, charge to it the stock put through it and credit it with the gasoline produced and you will find your cracked gasoline costs you less than the straight run, generally considerably less.

'Therefore, a high yield is the most important thing to get out of your cracking process because by just so much as the quantity of cracked gasoline predominates in the total gasoline output of your plant, by just that much the average cost of making your gasoline is cut down.'

"This man favors the use of a cracking process that will operate on fuel oil, first because the charging stock is cheaper, and second, because the quantity of crude is greater than the quantity of gas oil, the quantity of cracked gasoline from fuel oil is more than the quantity made from gas oil and therefore the total cost of all the gasoline made at the plant is cut down."

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

FAIRPORT OIL FIELD, RUSSELL COUNTY, KANS.

(Continued from Page 75)

shale, anhydrite, and some dolomite to the base of the Permian at 2,100 feet. The upper part of the Pennsylvanian is blue shale with several thin limestones with a sandy lime carrying gas at 2,450 feet. Below this is 200 feet of massive

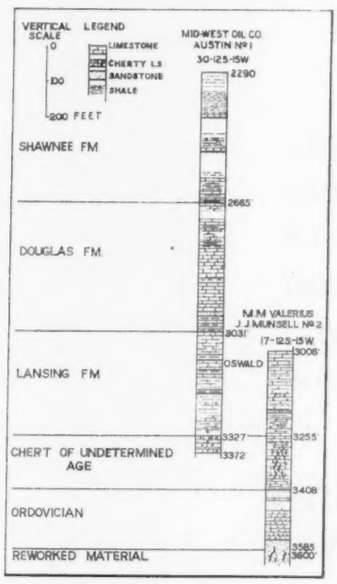


Figure 11.

limestone. The Dodge horizon is a 15-foot limestone under blue shale and overlying a variegated shale. It has a porous streak containing low-grade oil of 35 degrees Baume. Several small wells are producing from this horizon.

The base of the variegated shale marks the top of the Oswald horizon, which contains many streaks of high grade oil of 40 to 42 degrees Baume. There are several shale breaks or partings in the limestone from the top of the Oswald horizon to the base of the Pennsylvanian. The basal member of the Pennsylvanian is a sandy lime containing much cherty material. This material appears to be reworked Ordovician or older rocks and indicates a great unconformity. The pre-Pennsylvanian is mostly sand and sandy lime, probably Ordovician or Cambrian in age. Beneath this is a crystalline rock containing quartz, mica, chlorite and granitic particles.

Surface Structure

The surface structure as shown in the Greenhorn limestone is the largest and best structure known in this area. The structure stands above the regional plane of the Greenhorn limestone and is 4

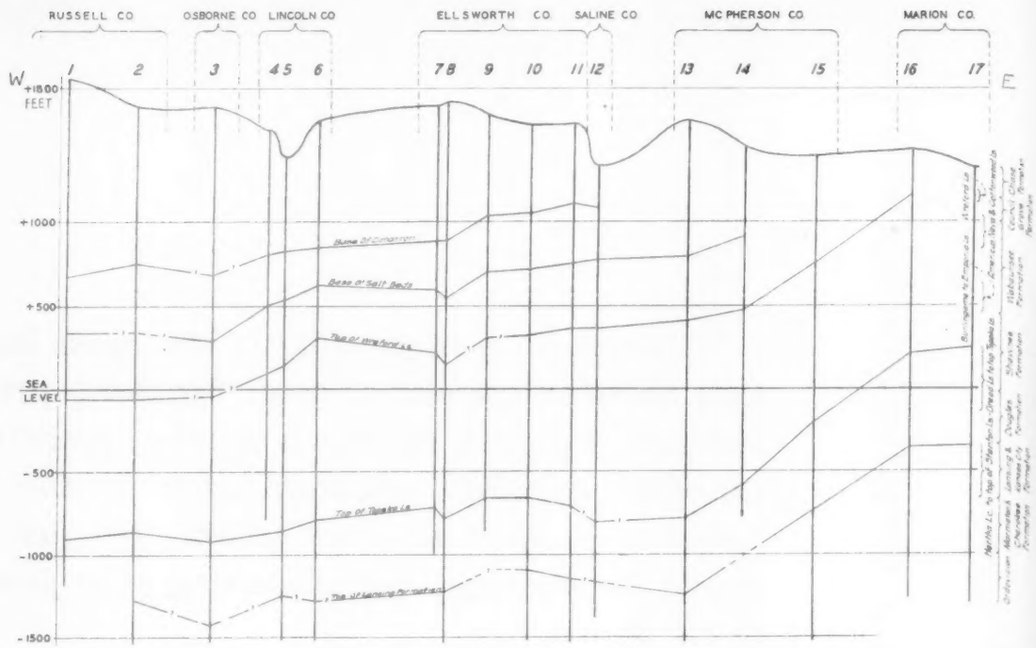


Figure 8—Correlation of well records, showing tentative determinations of geologic units extending from Marion County into Russell County, Kansas.

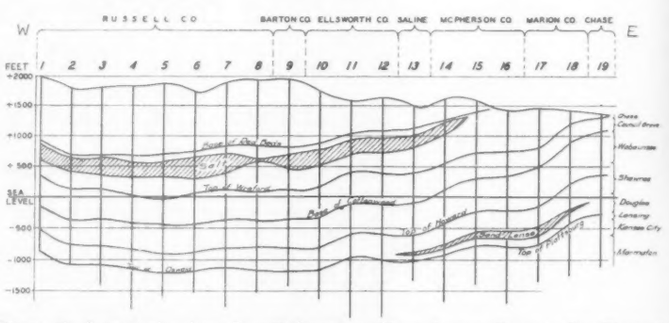
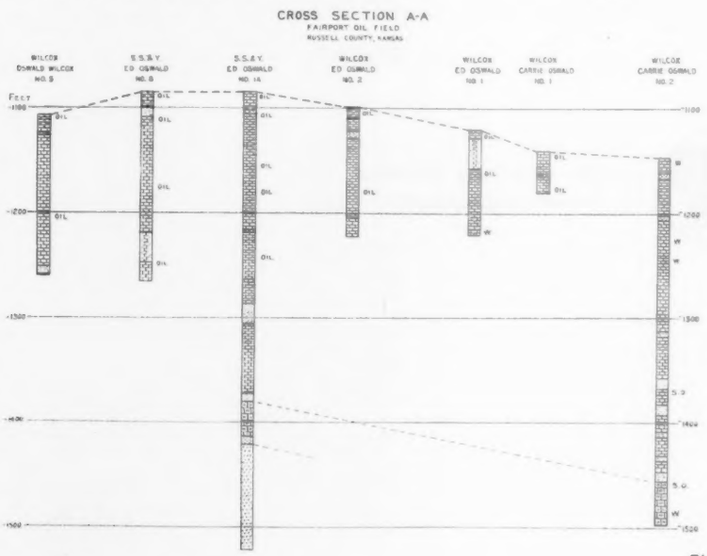


Figure 10—Cross-section from Russell County to Chase County, Kansas. See Figure 9 for location.

IDENTIFICATION OF WELLS

1.	Sec. 5, T. 11-S, R. 15-W	T. C. Johnson	Kollman No. 7.
2.	Sec. 32, T. 11-S, R. 15-W	Derby Oil Co.	Dodge No. 4.
3.	Sec. 24, T. 12-S, R. 15-W	Producers & Refiners	Haise.
4.	Sec. 31, T. 12-S, R. 14-W	Lewis Oil Co.	Haise No. 1.
5.	Sec. 13, T. 12-S, R. 14-W	Prairie Oil & Gas Co.	Hill No. 1.
6.	Sec. 3, T. 13-S, R. 13-W	M. M. Valerius Oil & Gas Co.	Phillips No. 1.
7.	Sec. 6, T. 14-S, R. 12-W	Shoemaker-Townsley	Lindsay No. 1.
8.	Sec. 36, T. 15-S, R. 13-W	Alcorn	Fellens No. 1.
9.	Sec. 11, T. 16-S, R. 12-W	Orlando Petroleum Co.	Schauf No. 1.
10.	Sec. 1, T. 16-S, R. 10-W	Carter Oil Co.	Doubrava No. 1.
11.	Sec. 3, T. 16-S, R. 8-W	Phillips Petroleum Co. and Wrightsman	Kunkle No. 1.
12.	Sec. 21, T. 15-S, R. 6-W	Keys Petroleum Co.	Sheridan No. 1.
13.	Sec. 5, T. 16-S, R. 5-W	Skaer Crum Oil Corp.	Peterson No. 1.
14.	Sec. 9, T. 17-S, R. 4-W	Linsburg Oil & Gas Co.	Sangren No. 1.
15.	Sec. 29, T. 18-S, R. 2-W	Merriam, Reeves & Shidel	Anderson No. 1.
16.	Sec. 2, T. 18-S, R. 1-W	Mountain States Oil Co.	Clark.
17.	Sec. 26, T. 21-S, R. 2-E	Pierce and others	Brogdon No. 1.
18.	Sec. 11, T. 20-S, R. 4-E	(From Bulletin 3, Geol. Surv. of Kansas)	Mehl No. 1.
19.	Sec. 8, T. 18-S, R. 8-E	Robert Watchorn	Patton.



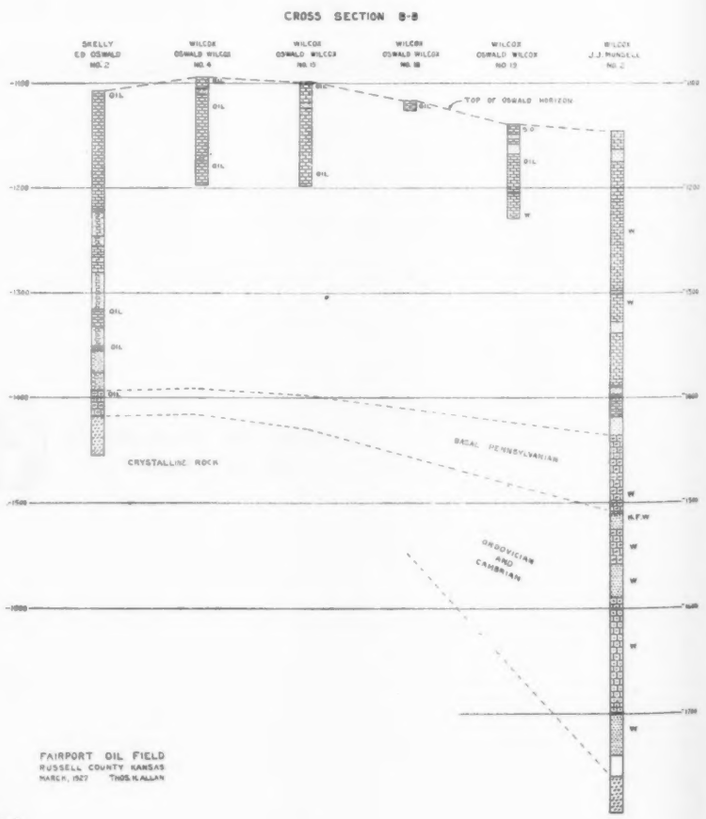


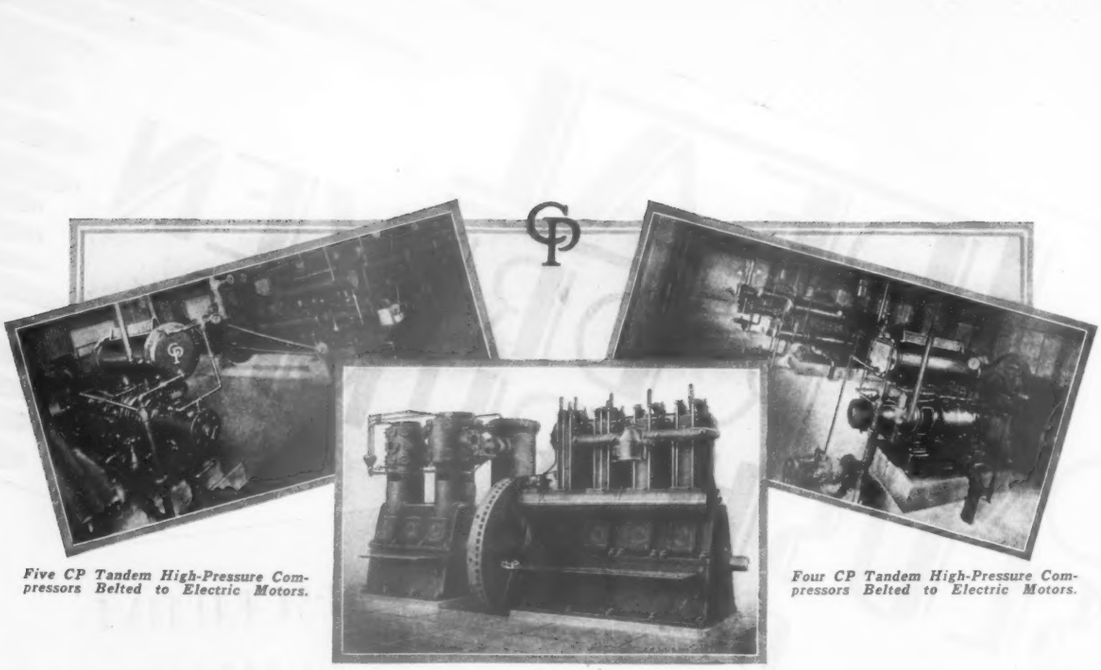
Figure 6.

IDEAL POWER DRIVEN SLUSH PUMP

6¾ X 14

DESCRIPTIVE BULLETIN 4-NA ON REQUEST

THE NATIONAL SUPPLY COMPANIES



Five CP Tandem High-Pressure Compressors Belted to Electric Motors.

Four CP Tandem High-Pressure Compressors Belted to Electric Motors.

CP Duplex two-stage vertical compressor, direct-connected to a CP Gas Engine.

CP Compressors for Oil Field Service

THE ingenuity and skill that produce CP compressors, are the result of nearly thirty years of highly specialized experience. In oil fields throughout the world, CP compressors are establishing remarkable performance records, due to the following advantages:

CP units are easily installed — require simple foundation — often mounted on skids including the motor.

Easily moved from one location to another.

Adaptable to battery installations for centralized control.

Arranged for any form of drive.

Every CP compressor is Simplate valve equipped.

If you have wells to flow, or require compressors for any purpose, let our oil-field engineers confer with you. They have had a wide experience in oil-field work.

CP Oil-Field Equipment:

Portable Compressors for cleaning or testing wells,
Compressors for flowing wells,
Vacuum Pumps, Condensers and Compressors for refinery service,
Gas Compressors for pressure boosting,
Diesel Engines, 80 to 450 h.p.,
Gas Engines, 90 to 270 h.p.,
Riveting, Chipping and Calking Hammers, Drills, Reamers, Grinders, Nut Runners and Scalers for tank farm construction and maintenance.

C-260

Chicago Pneumatic Tool Co.

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Sales and Service Branches all over the World

Whealton & Townsend, Inc., *Authorized Distributors*

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miles long with an east dip of 40 feet to the mile and a west dip of 50 feet in one-quarter of a mile. (Figure 3).

Subsurface Structure

The structure becomes sharper with depth and on the Oswald horizon (2,900 feet deep) the dips are about four times as steep as those on the surface. Figure 5 shows the relation of surface structure to that on the oil-bearing horizon. The axis has moved about one location west and the steep west dip is so straight that it seems to have been caused by the Pennsylvanian sediments being deposited over a fault escarpment in the older rocks.

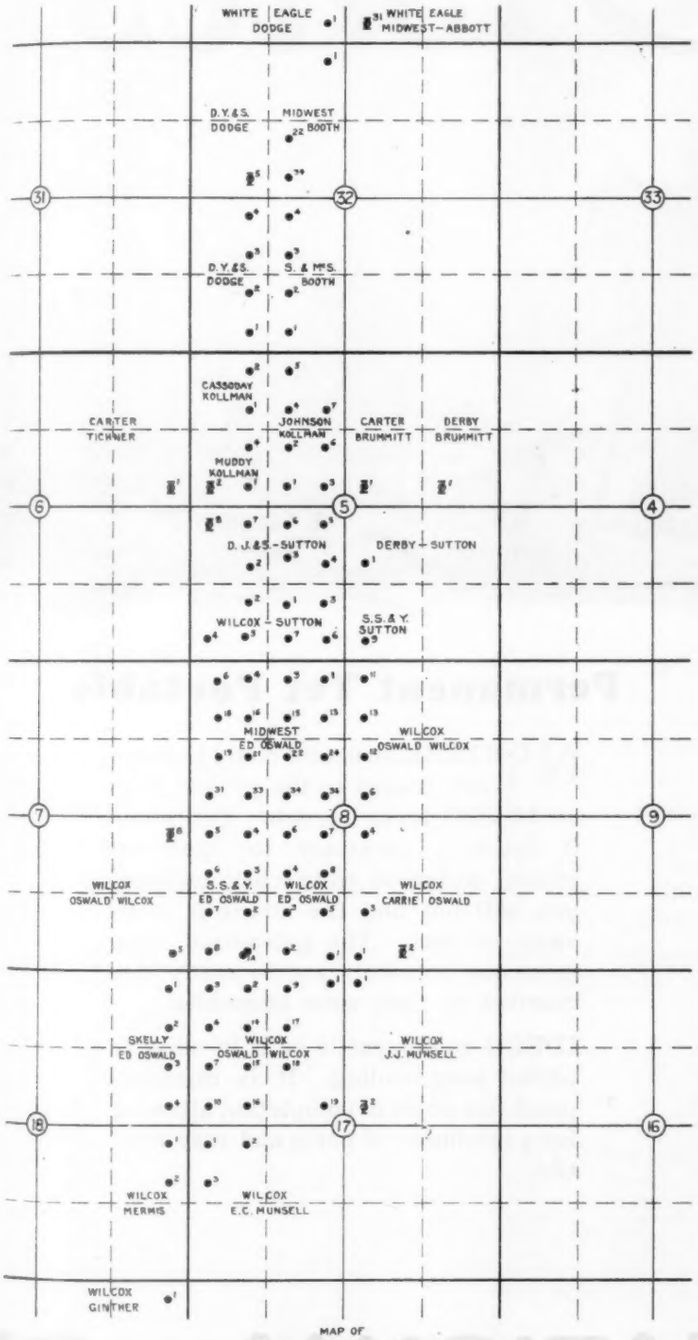
From the few wells drilled deeper it appears that the pre-Pennsylvanian rocks are much more steeply folded, and of Cambrian and Ordovician age overlying a structure in crystalline rocks. (Figure 6).

Reservoir Rocks

The oil occurs in porous streaks in the limestone seemingly caused by the circulation of water. The thickness of these streaks ranges from a few inches to a few feet. They are found at the top, and 30, 45, 65, 85, 98, 160, 175, and 220 feet below the top, of the Oswald horizon. Uneven porosity is evident as each well has a different history in each streak. The wells commence with different initial productions, decline at different rates, and miss some of the "pays" entirely. A well in a pay streak where the porosity is great has a higher initial production than where the porosity is small, and maintains its production longer where the porosity extends away from the well than where the porosity is very local around the well.

Relation of Accumulation to Structure

The oil has accumulated on top of the structure surrounded by water five times as salty as sea water. The production extends 60 feet down the east and south sides in Sections 8 and 17 but only 30 feet down the east side and 10 feet down the west side in Section 5. Production



MAP OF
FAIRPORT OIL FIELD
RUSSELL COUNTY, KANSAS
MARCH, 1927 THOS. H. ALLAN

Figure 1.

SPECIAL OIL-WELL

STAINLESS STEEL
CHROME
MO-LYB-DEN-UM
STEEL

Strom Balls are held accurate to size to within, plus to minus, .00005 and sphericity to within .000025 — *therefore all Strom Balls render a like service.* You can obtain Strom Balls through your regular supply jobber—if not, write us.

BRASS or BRONZE

Four kinds of balls for working barrel applications. Their quality is evidenced by the fact that

OVER 85%

of the balls used in the oil industry are produced by

STROM

Strom Steel Ball Co.

The largest independent and exclusive steel ball manufacturer
(Plant at Cicero, Ill.—suburb of Chicago)

360 No. Michigan Ave. Chicago, U. S. A.

Pacific Coast Office
304 Pacific National Bank Building
Los Angeles, California

Ashes to Ashes

Permanent Yet Portable

NO STEEL structure could be more firmly rooted to the ground than an IDECO Steel Derrick. Yet, when it becomes necessary to "pull up stakes" and move on to a new location, you will not find the strength eaten away by rust. The galvanized nuts, bolts and members are as easily dismantled as they were assembled.

IDECO equipment is built in units to permit easy hauling. It is manufactured to a point of completion allowing for a minimum of parts and easy erection.

THE INTERNATIONAL DR

Ashes to Ashes,
Dust to Dust,
If a hurricane doesn't get you,
A fire must.

SUCH is the weird song sung by the ghost of destruction to the owners of wooden or other inferior derricks. Some men are good gamblers—they are willing to stake their property and the lives of their men against the possibility of disaster. Others are more cautious. They use IDECO Galvanized steel derricks.

Why wait until your property is laid low—take heed now. IDECO Derricks give you peace of mind. Built of structural steel and designed like a modern sky-scraper they withstand wind, lightning, fire and vibrating strains. Galvanized by the "hot-dip" process, they are thoroughly armored against rust and corrosion.

Write to the nearest "International" Derrick & Equipment Company Warehouse for sizes, prices and deliveries.

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(GALVANIZED)

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

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The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

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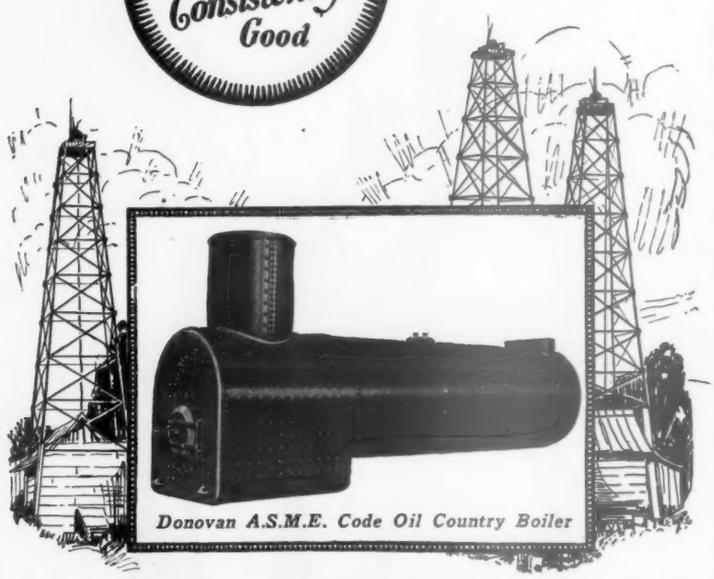

Donovan A.S.M.E. Code Oil Country Boiler

CAN BE COUNTED ON

For More Than Usual Results

Donovan Boiler Works, Desdemona, Texas.
Parkersburg, W. Va.

Gentlemen:

Will you kindly send me some information relative to boilers in general and your boilers in particular?

I have been employed as a tool dresser for several months and it has been my experience that when pulling the tools from the well rapidly, the water would pull over from the boiler to the engines, provided one was carrying three gauges. At the same time, when tools were being pulled from any considerable depth, the steam pressure would fall 20 to 30 pounds.

The well at which I am now working has a DONOVAN boiler, the first I have seen. The first time I pulled the tools rapidly from about 2,800', I found, when examining the boiler immediately afterward, water in the third gauge and a decrease in pressure of only five pounds. I was much impressed and surprised.

The boiler in question has 60 flues about 10' long. The engine 12"x12". The contractor tells me the boiler is 40 H.P. and when pulling tools, a 10 pound decrease in pressure has been the maximum. The dome is taller than on other boilers of its size, otherwise, I see no apparent difference.

Information on the subject will be appreciated. I find that about some matters, questioning the more experienced men is rather fruitless. Facts are accepted—wherefores and whys are ignored.

Respectfully,
(Signed) H. H. WILSON.

Manufactured by

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FRICK-REID SUPPLY COMPANY
Mid-Continent Distributors
GREAT NORTHERN TOOL & SUPPLY CO.
MIDLAND IRON WORKS
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All Leading Supply Houses Throughout the Eastern Fields Handle

DONOVAN QUALITY PRODUCTS
NONE BETTER

at the north end will probably not extend far down the north end as the two wells farthest north are producing from the Dodge low-gravity "pay", having obtained water in the top part of the Oswald horizon.

Production

The Fairport Field has been producing for three years, has been drilled up for six months, and has produced about 3,500,000 bbls. of 40 degrees Baume black oil. The SW of Section 8, has the highest production per acre, 6,400 bbls., due to having the oldest wells and obtaining high initial production while the oil pressure of the field remained high. The field has averaged 3,500 bbls. per acre to date.

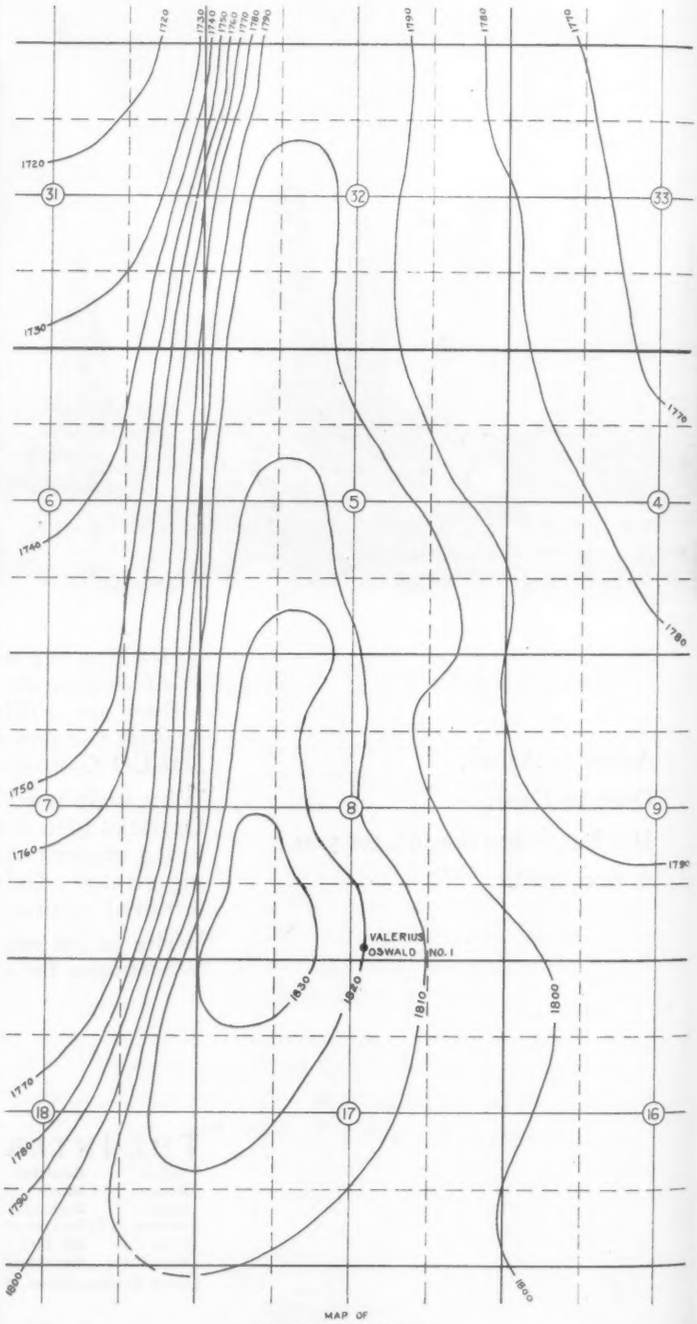
By M. M. Valerius

The producing "sands" in the Fairport Field are, as described in the preceding part of this paper, porous streaks in a limestone series locally known as the "Oswald lime."

During the early stages of development in the Fairport Field, a correlation of the Oswald horizon was made by the State Geological Survey of Kansas. The correlation would appear to have been partly upon paleontologic evidence, and partly upon the stratigraphic position of the Oswald as indicated by a cross section carried westward from Marion County. (Figures 7 and 8). As a result of the studies conducted, the Kansas Survey definitely correlated the Oswald horizon with the Oread member of the Douglas formation. This correlation has been, and is, generally accepted without comment.

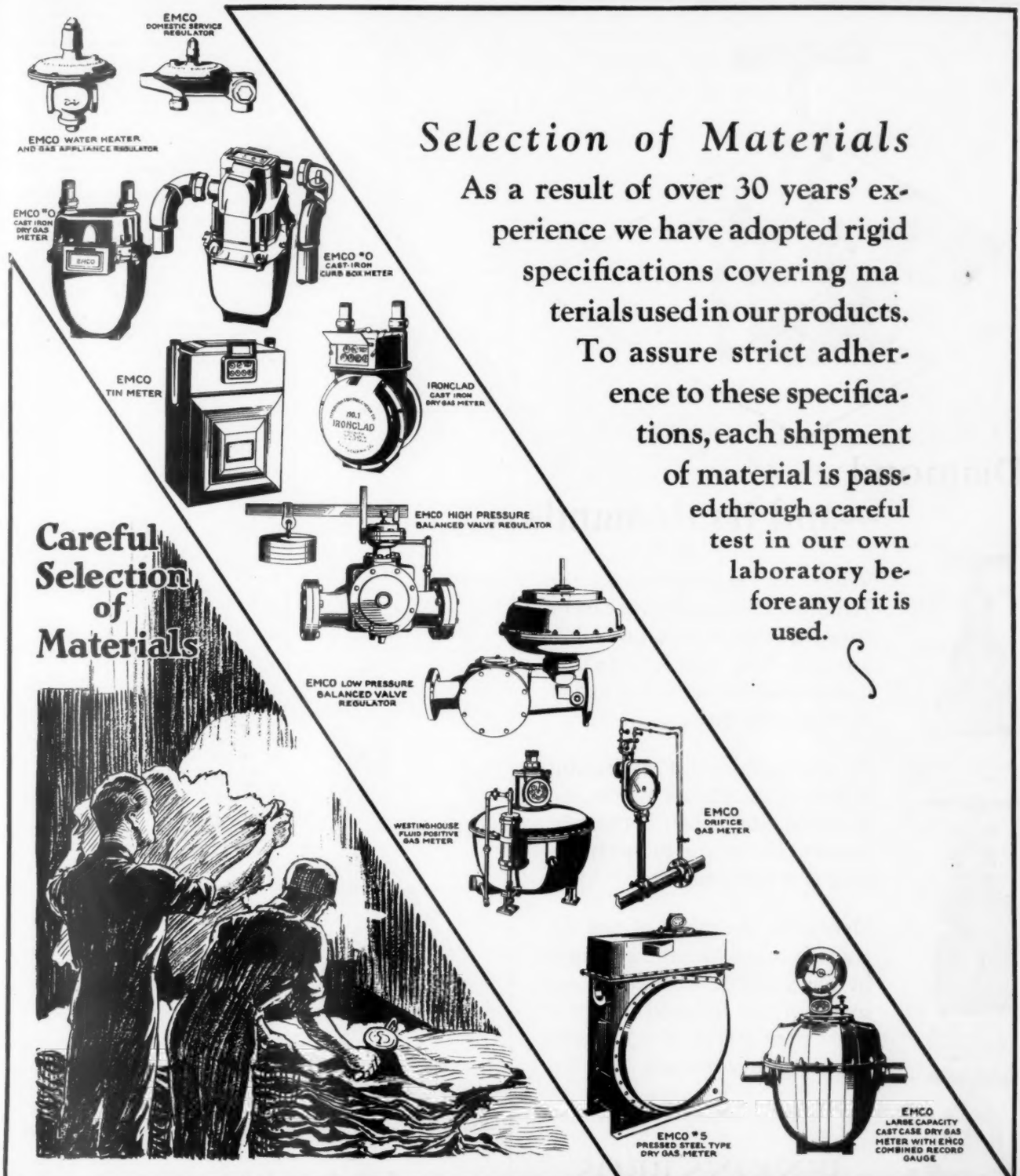
Since the correlation by the Kansas Survey, much new material has been furnished for correlation studies by the completion of numerous tests in the region. Samples from the more recent wells have yielded many fossils which, according to Bruce Harlton[1], show conclusively that the Oswald is not a correlative of the

[1]Paleontologist, Amerada Petroleum Corp., Tulsa, Okla.



MAP OF
CRETACEOUS STRUCTURE
FAIRPORT OIL FIELD
RUSSELL COUNTY, KANSAS
MARCH, 1927 THOS. H. ALLAN

Figure 3.


EMCO
DOMESTIC SERVICE REGULATOR
EMCO WATER HEATER AND GAS APPLIANCE REGULATOR
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EMCO TIN METER
IRONCLAD CAST IRON DRY GAS METER
EMCO HIGH PRESSURE BALANCED VALVE REGULATOR
EMCO LOW PRESSURE BALANCED VALVE REGULATOR
WESTINGHOUSE FLUID POSITIVE GAS METER
EMCO ORIFICE GAS METER
EMCO "5" PRESSED STEEL TYPE DRY GAS METER
EMCO LARGE CAPACITY CAST CASE DRY GAS METER WITH EMCO COMBINED RECORD GAUGE
Careful Selection of Materials

Selection of Materials

As a result of over 30 years' experience we have adopted rigid specifications covering materials used in our products. To assure strict adherence to these specifications, each shipment of material is passed through a careful test in our own laboratory before any of it is used.

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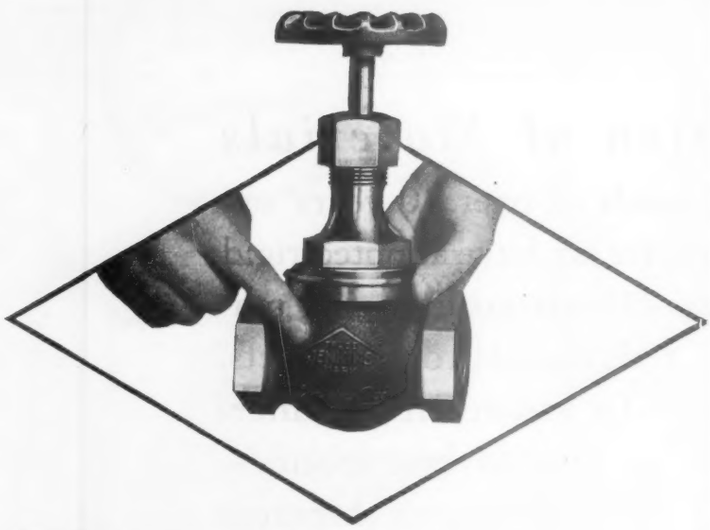
TULSA SEATTLE KANSAS CITY SALT LAKE CITY



A Diamond —and its demands

Fig. 370
Screwed, Jenkins Standard Bronze Gate Valve

Fig. 325
Screwed, Jenkins Standard Iron Body Gate Valve

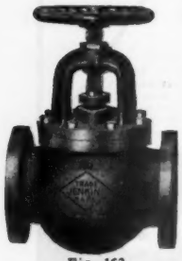


Fig. 162
Flanged, Jenkins Extra Heavy Iron Body Globe Valve

When an engineer sees the Jenkins "Diamond," he can be sure that the valve on which it appears has met severe demands and has satisfied exacting requirements.

In the making of a Jenkins Valve, demands are made first of all on the metal; it must be proved by analyses both before and after casting.

Demands are made of the design; it must provide strength in every detail. Demands are made of the finished valve; it must pass a test which allows a wide safety margin.

At supply houses everywhere.

JENKINS BROS.

80 White Street.....New York, N. Y.
524 Atlantic Avenue.....Boston, Mass.
133 No. Seventh Street.....Philadelphia, Pa.
646 Washington Boulevard.....Chicago, Ill.
JENKINS BROS., Limited
Montreal, Canada London, England

Always marked with the "Diamond"
Jenkins Valves
SINCE 1864

Oread, but in reality occurs at the top of the Lansing formation. The stratigraphic position of the Oswald at the top of the Lansing is further proved by the results obtained in the careful cross-section studies of C. A. Cheney[2], who has carried an accurate cross section westward from the Nemaha Mountains (Figures 9 and 10).

The partial columnar sections (Figure 11) are typical of the Fairport Field. As will be noticed in No. 1 Austin, the Shawnee formation extends from a depth somewhat less than 2,190 feet to a depth of 2,665 feet; the Douglas (at the top of which is the Oread horizon) occurs between the depths of 2,665 feet and 3,031 feet; and the Lansing, with the Oswald at the top, occurs between the depths of 3,031 feet and 3,327 feet. This correlation is based upon the identification of fossils.

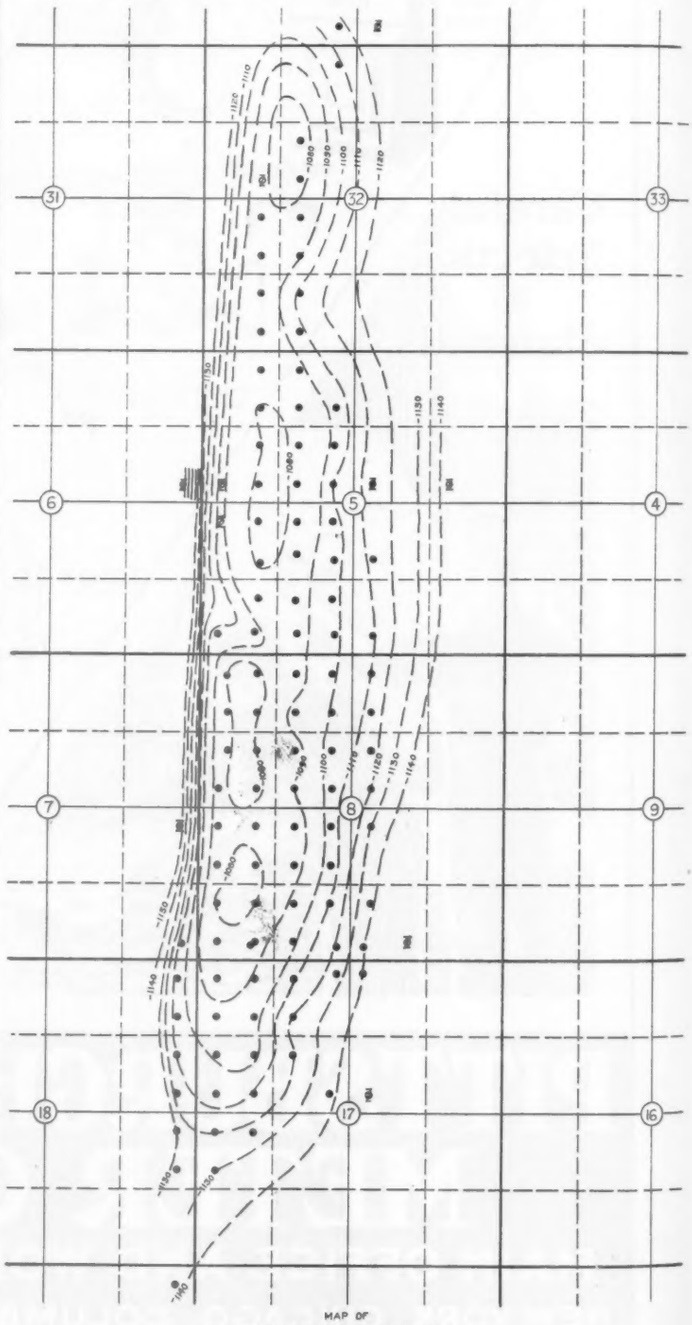
No. 2 Munsell of the H. F. Wilcox Oil & Gas Co. has been drilled to a total depth of 3,645 feet. From the base of the Lansing (3,255 feet) to a depth of 3,048 feet, the drill penetrated cherty limestones, shales, and sandstones, the cherty limestones predominating. This section is of undetermined age. From 3,408 feet to 3,585 feet occur sandy dolomites and sandstones of undoubted Cambro-Ordovician age. The bottom 60 feet of hole was drilled in reworked material, in part arkosic. It would appear that this hole bottomed not far above the top of the pre-Cambrian.

(Figure 5 Shown on Page 101)

[2]Consulting geologist, Tulsa, Okla.

DEATH OF M. F. TUCKER

M. F. Tucker, who spent 27 years in the oil business, died in San Antonio February 28. He was superintendent in Wyoming for the Carter Oil Co. and later for the Marine Oil Co. He also operated in California, Oklahoma, New Mexico and Burma. At the time of his death he was vice president of the Tritex Oil Co., which had just completed one gasser in Zavala County, Texas, and was preparing to drill another.



MAP OF
PENNSYLVANIAN STRUCTURE
FAIRPORT OIL FIELD
RUSSELL COUNTY, KANSAS
MARCH, 1927 THOS. H. ALLAN

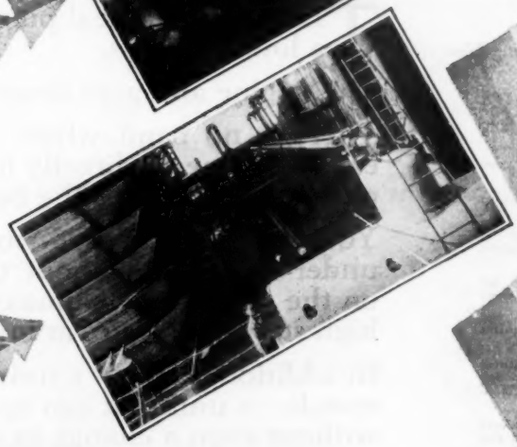
Figure 4.

BRAUN APPARATUS IS TESTED

CHEMICAL ANALYSIS OF MATERIAL

PHYSICAL TEST OF MATERIAL

COMPLETE PERFORMANCE TEST OF FINISHED APPARATUS



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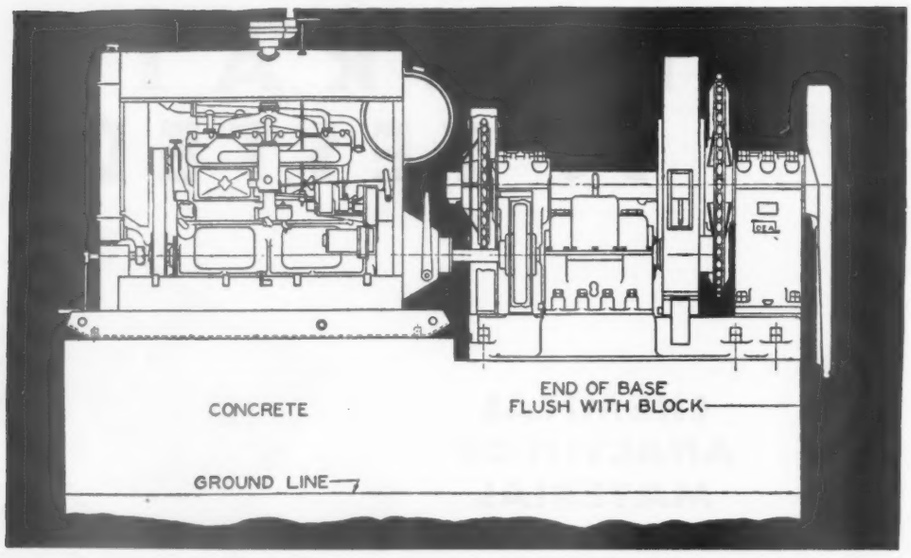

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What the Oil-Sure Ideal Pumping Unit Gives You.

Smooth pumping at variable speeds. Engine and pump built into one unit.

A unit easy to move.

A unit with all gears running in oil.

An engine equipped to burn gas or gasoline.

An engine that may be equipped with electric starter.

An engine equipped for telegraphic (remote) control.

An engine that requires but little attention.

And a lot of other features that are described in our new "Oil-Sure Ideal" Catalog.

Send us your name and address. We'll mail the catalog to you.

CLIMAX

Trade Mark Reg. U.S. Pat. Off.

THE Oil-Sure Ideal pumping unit can put your pumping on a low cost basis.

The engine and gear come as 2 complete units, ready to install.

There is no band wheel and no belt. The Climax Oil-Sure engine connects directly to the "Ideal" reduction gear and the gear is connected to the beam by a Pitman.

You can start this Oil-Sure Ideal pumping unit at high-speed, under full load, without the least danger of pulling couplings on the sucker rod. Climax Oil-Sure engines have uncommonly high starting torques at low speeds.

In addition, you get a unit that can pump smoothly at variable speeds—a unit that can operate equally well on gas or gasoline without even a change in carburetor.

Read the side column—then write for the booklet.

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NSCO

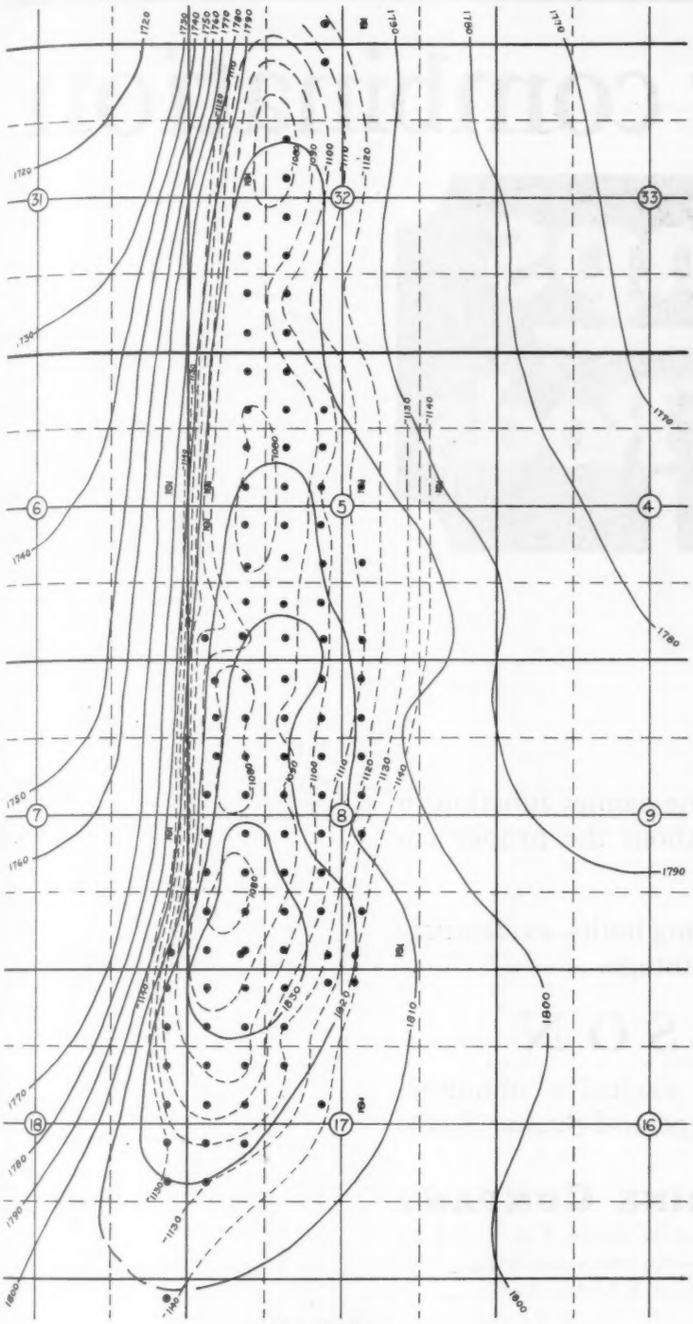


Figure 5.

J. S. COSDEN PURCHASES CLEARVIEW PROPERTIES

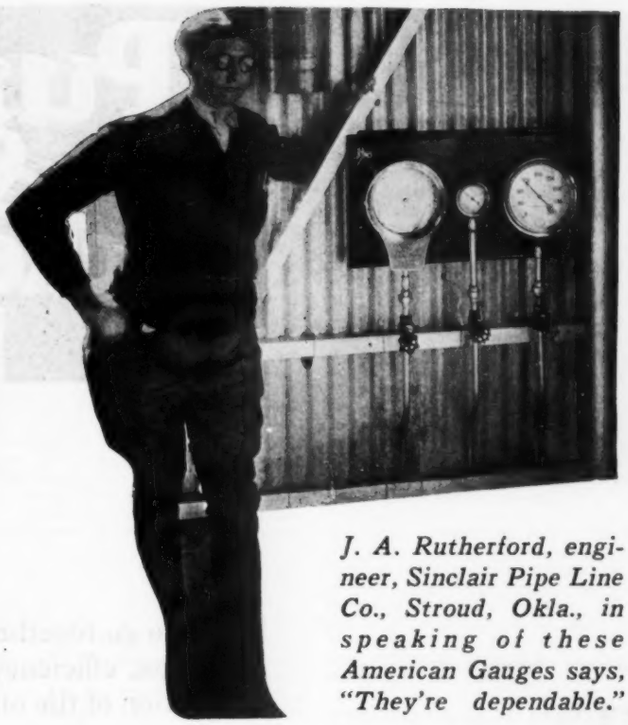
Negotiations were completed last week which marked the re-entry into the Oklahoma oil fields of Joshua S. Cosden, founder of the old Cosden Oil & Gas Co., which is now the Mid-Continent Petroleum Corp.

Mr. Cosden has been operating for some time in the Texas fields under the name of Cosden & Co., but his purchase of the Clearview Pool properties of the Riverland Oil Co. in Okfuskee County, Oklahoma, is the first step he has taken in Oklahoma since his retirement from the Mid-Continent.

The properties purchased include 5,000 bbls. production from four wells and some 500 acres of undeveloped leaseholdings. The Clearview Pool was discovered by the Riverland company, and the wells are making their oil from the Wilcox sand. The purchase price, which was not officially announced, is believed to be $550,000, of which $400,000 was paid in cash last week upon the approval of the Riverland title to the land. The remaining $150,000 will be paid in oil money from a part of the runs from the property. The Riverland company has discovered three fields in Osage County, two pools in the south end of Tulsa County, and the more recently uncovered pool near Clearview. The land sold to the Cosden company includes the SW of Section 19-11-11, 120 acres in the SW of the same section, and an 80-acre lease south of this land.

It is understood that Carl H. Pforzheimer & Co., investment bankers of New York, are deeply interested with Mr. Cosden in his new venture.

"They're dependable"



J. A. Rutherford, engineer, Sinclair Pipe Line Co., Stroud, Okla., in speaking of these American Gauges says, "They're dependable."

The engineer prefers American Gauges and Thermometers because he knows he can rely upon their long service and constant accuracy.

Write for the following:

Gauge Catalog A-5
Recording Gauge Catalog E-5
Thermometer Catalog F-5
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Temperature Controller Catalog R-5
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AMERICAN INSTRUMENTS

American
Schaeffer & Budenberg
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338 Berry St., Brooklyn, N. Y.
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Makers of American Industrial Instruments since 1851.

The *inseparable* combination

The two go together; one cannot function to its fullest efficiency without the proper co-ordination of the other.

One Organization, making both—*exclusively*—enjoys a decided advantage.

AXELSON

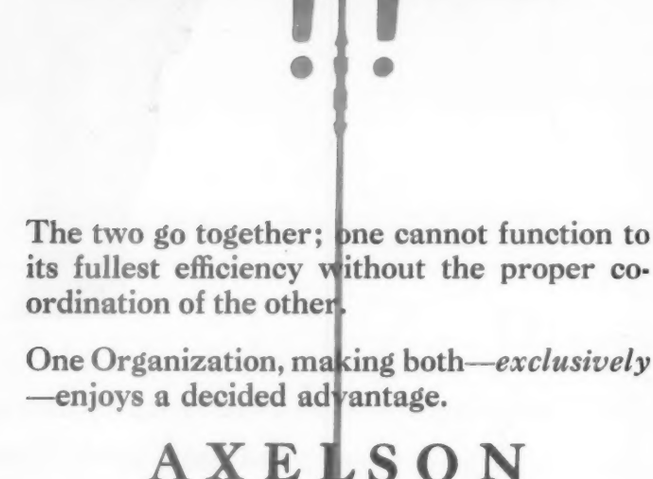
—the World's largest exclusive manufacturers of Oil Well Pumps and Sucker Rods.

AXELSON MACHINE COMPANY

P. O. Box 337, Los Angeles. Tulsa, St. Louis, New York City

Mid-Continent Distributors—Frick-Reid Supply Co.

Eastern Distributors—Frick & Lindsay Co.



MEMBERS OF A.O.M.A. CONSIDER SITUATION

(Continued from Page 32)

were willing to sit around the table and discuss the problems. He raised a very decided objection to the practice of coming to a convention and then spending the time in the various rooms of the hotel occupied by the oil companies who liberally and freely entertained their visitors. As voiced by the speaker, the remark was a stinging rebuke to both the entertainer and the entertained as it prevented the accomplishment of the real and only valuable purpose of the gathering. In summing up, the speaker said that one reason for the prosperity of his concern was that it was a hard and fast rule with his organization not to make a sale that did not show a profit. This was the only guide post to the road to plenty There being no further speakers, the meeting then adjourned until the luncheon on the following day.

The only business before the convention on the morning of the second day was the election of successors to the retiring members of the board of directors and the officers for the ensuing year.

Cash-and-Carry Dealers

In introducing his first speaker, R. S. Williams, the chairman, stated that he was not only president of his own company, the Williams Oil Co. of Munice, Ind., and of the Indiana Petroleum Marketers Association, but had been that morning selected a director of the American Oil Men's Association. Mr. Williams' subject was the same as that of the other speakers, "Profits for 1928," which he was to consider from the standpoint of the jobber. There were many in the audience who have had no experience with what Mr. Williams called "cash-and-carry" oil distributors. To some of these it was quite a revelation. The speaker said he was speaking from his own experience as a small jobber. There were many jobbers who would have a good business in 1928 but there were others who would not. To many it seemed that the industry was passing through one of the worst crises in its history. In some cases this was due to the advent of the previously mentioned "cash-and-carry" dealer. These dealers, the speaker said, were quick to take advantage of any opportunity to make an impression on the buyers or to create a wrong impression. The trouble was that there were some things in the conduct of an average oil business that it was hard to explain to the public. For instance, there is the delivering of gasoline 5 or 10 miles at the same price as it was sold right from the station with no cartage costs The "cash-and-carry" dealer would stress the fact that he had no truckage expense and could sell for that much less. Now, of course, the saving through the elimination of deliveries is not 2 cents a gallon as claimed by the cut-price dealer but it makes a good advertisement and the public knows that there is some truth in the statement. It is not so easy to show them that a good truck man can easily sell from 500 to 800 gallons a day from a truck that costs 3,500 while the station is a good one that will sell as much and costs many times as much as the truck. The speaker showed an advertisement which read in part: "Other concerns have operating costs which I have eliminated."

The speaker blamed the refiners in part for this condition. The ideal customer was the buyer who would agree to purchase a considerable quantity of a product over a considerable period at the market price. This was what the maker of a marginal contract did yet the operator of a cut-price station was usually able to buy for less than the regular dealer in the spot market by picking up the surplus that the refiner would offer at low prices to close out his surplus. In his town the station price had declined from 19.3 cents to 15 cents, including the 3-cent tax, through the operation of one of these dealers. Located on a railroad siding right in the heart of the town, his station was a menace yet it was permitted to operate. Part of the blame for this condition was due the railroads. The speaker was asked what his reply had been to the advertisement displayed by him and he confessed that after six months' study he had been unable to find an entirely satisfactory reply.

Regulation Suggested

There was considerable discussion after the address. Sam Hurd, secretary of the Indiana Association, stated a number of cases where this type of operator had done an enormous business. In many cases the plants were located right in the heart of the city. One dealer in Indianapolis was mentioned as having 30,000 gallons of storage which the public could drive over. There was the possibility that some day there would be a disastrous result from this condition. He thought that a remedy might be found by a regulation by the Bureau of Explosives prohibiting the spotting of cars for unloading at any point of contact with the public. It was suggested that if he would make the trip to New York and interview Colonel Dunn, head of the Bureau of Explosives, it might be possible that some such rule could be put in force. It would be useless to try to get the individual roads to make such a rule as others would not, preferring to secure the freight. Secretary Gilmore said that the organization would finance the trip but it was stated subsequently that a move had been made that would make the trip unnecessary. The exact nature of the proposed plan to eliminate the bulk station distributor operating on a railroad siding was not disclosed but it seemed to gratify the members to know that something was being done.

Several members spoke, among them being Messrs. Beroth, Crosby, Packard & Sweeney. Among suggestions was that the best reply was to advertise and stress services, including quality, and ignore the price. Mr. Sweeney told of their experience in selling a high-grade product in the face of a 10-cent station price. He said they had put out a high-grade lubricating oil at a much higher price than the usual price and they had not only increased their sales but added to their profits which had helped a lot in the condition prevailing in his locality. Other instances were mentioned where substantial increases in profits were made through the sale of higher grades of gasoline. Some reported that they had offered their trade a 68-70 gasoline at 5 cents above the normal station price and had found that even the smaller communities would buy that grade, in preference to the regular U. S. Motor. Some of the buyers stated that they found the better gasoline worked so much better and some that they saved repair bills by using the more expensive motor fuel. Benzol blends were also cited as an instance of what might be done as a large business could be and had been built up on a blend that sold at even higher margins than the 5 cents margin asked for the 68-70 gasoline, in some cases the margins being as high as 9 and 10 cents.

Mr. Packard Talks of Tax

The succeeding speaker was Frank E. Packard, general and tax attorney for the Standard Oil Co. of Indiana Before beginning his address, Mr. Packard stated that after looking into the subject of a refund on payments of the gasoline tax in Illinois he had concluded that there was very little if any chance of securing by any method a refund of the tax paid in Illinois before the last day of December for the reason that the law provided a way to secure a refund of any illegal tax and this method included the paying of the tax under protest which protest must be made within 30 days after the payment and steps taken to enforce the collection of the refund. Once the tax was covered into the treasury there was no way to get it out except through an act of the Legislature and even that body could only appropriate it for the purpose for which the tax was collected, in this case for the roads. Mr. Packard also stated that he had had some jobbing experience and said that it was along the same line as that of the other oil men who had made a success of their business by meeting the public's demand for better service, better material and, above all, for courtesy in the stations. The Standard Oil Co., he said, has a large school and is training its employes to give the best possible service. His address was on the subject, "No Use in Making Profits If You Do Not Save Them."

Address by R. B. Anglin

One of the best addresses of the meeting was made by R. B. Anglin, vice president and sales manager of the Indian Refining Co. In opening, Mr. Anglin stated that previous to becoming an oil man he had been a brewer and that the problems that he had been compelled to meet as an oil man were essentially no different from those which he had confronted in his previous experiences. Speaking of his own organization he said that as a result of the starting of the O.D.A they had been compelled to cut $1,000,000 out of their expenses and that the president had said he knew of an easy way to do that, simply reduce the selling expenses that much. They began with their accounting system and found that it was weeks before the necessary data reached the management. This had been corrected. A simplified yet thoroughly efficient system had been applied where each one knew just what he had to report and how to do it and the result was that the management knew immediately just what was going on. Unprofitable stations had been eliminated. They had withdrawn from 19 States and concerted their efforts in 5 States and had saved a very little less than $1,000,000 and had increased their business and profits by so doing. He urged the dealers present to cut out surperfluous stations, nonprofit making stations, to simplify their accounting system, to stop the practice of buying business by free gifts and sell their products as others sold their industrial output, at a profit.

The annual dinner was without any speech making. There was an attendance of about 200. At the close of the dinner the film, "Story of Petroleum" was shown to an appreciative audience.

Cutting Down Losses

Bert Rentmeester of the Oconomowoc, Wis., Oil Co., addressed his fellow jobbers at Thursday's session on the conduct of a jobbing business. He said their volume of sales varied little from year to year. They had resolved that the way to grow was to cut down the losses. After a careful investigation of the business of the company he had found that the greatest source of loss was in lack of co-operation among the employes and with the plans or ideals of the company. To make a really loyal and efficient organization was a thing that required much care and study. One of their plans was to bring the employes together once a month, give them a good dinner and talk things over among themselves. This had done much but there were individual cases that required special treatment. One of their most loyal and earnest drivers was careless and met with many accidents which added to the upkeep of the trucks. He was set at the task of figuring out the truck delivery cost for a period and to do this was obliged to trace the accidents, who caused them and what they cost the company. He is now their most careful driver. Another kind of treatment had to be devised for the employe who was habitually a little late and so the building of a spirit of co-operation among the employes of the company did away with a great part of the losses. Another step that the Oconomowoc Oil Co. had taken was to refuse to make and Q.D.A. They figured that if they did give the allowances that when the profits that had been made in past years had been lost by this plan they would fade out from the business and they might as well fade away if they had to while they still had the profits previously made. They lost a few large accounts of concerns that bunched their purchases in large cities but they had lost nothing else and their sales had been kept at their regular volume by other new accounts which they had been able to secure, not so large but better paying. The general idea back of his talk was to attend strictly to your own business. In one instance they were confronted with a local cut in price. Instead of following the cut he told his drivers they would have a better gasoline and ask a cent more for it. The drivers went out and sold the better gasoline at the higher price and the people talked all around of the merit of the gasoline. He was loudly applauded by the audience.

L. F. Marshall, of the Merit Manufacturing Co., addressed the meeting on the profits of the lubricating business if properly handled. It was rather a sales talk for their method of management and accounting of a lubricating business. Estimates of the possible profits to be derived were shown by a statement taken from the results of the analyses of 100 jobs handled in their own laboratory. He was followed by G. W. Benedict of the same organization.

J. P. Nicholson, of the Kleen-Rite Auto Laundry Co., talked at considerable length on the details of what is a rather new business, that is the cleaning of the autos by a planned method. He estimated that the vast sum of $700,000,000 was spent annually in upkeep and care of cars by the auto owners of the country and this was a prize worth striving for. The auto laundry business is best handled where there are a number of cars, over 100 a day, according to the speaker and the small stations that only have a couple of dozen cars a day do not do enough business to support the station. Men of larger capital and better business experience are getting into the auto laundry business and it is being worked around to a better position. Many things must be considered in establishing such a business. The ideal station was one where there was sufficient business to keep the cars moving along, each attendant doing some special part of the cleaning. By this method it was possible to clean a car thoroughly in no more time than was required for a much less complete job under ordinary conditions.

PENNSYLVANIA MARKET NOW VERY ENCOURAGING

OIL CITY, Pa., Mar. 10.—The gasoline situation in the Pennsylvania refinery district is now very encouraging. The readjustments of tank wagon quotations throughout large sections of the East, combined with the raising of tank car quotations by the larger refineries has had a good effect on the trade and has made the outlook much brighter. However, the demand was not any better during the week.

Kerosene was no better in either price or demand but the refiners and marketers are expecting a much increased use of this product within a few weeks, as it is almost time for the spring plowing trade.

Neutrals are improved in both price and demand. The market for this product is much improved. Cylinder stocks remain unchanged. The wax market is better in price, inquiries and actual sales. The fuel oil market continues strong with the fundamental basis good. The motor oil market was booming during the past week with a great increase in demand.

WOODLEY SELLS INTEREST

SHREVEPORT, La., Mar. 10.—E. L. Woodley, for a number of years an operator in the north Louisiana and Arkansas fields and organizer of the Woodley Petroleum Co. of Shreveport, has withdrawn from the company, according to news from Dallas, where he has made his headquarters for the past two or three years, and sold all his interests in the company to local capital. At the annual meeting here, J. R. Barten, formerly treasurer of the company, was made president succeeding Mr. Woodley; R. H. Deas, Shreveport, was elected treasurer; Eugene Palmer was made chairman of the board; Frank Alberts, vice president; J. R. Pope, secretary; P. J. Slimer, assistant secretary, and J. C. Oden, assistant treasurer. Other members of the board are R. J. O'Brien, Shreveport; Frank Alberts, Muskegon, Mich.; G. John Koolker, Holland, Mich.; Louis Ravicz, New York; J. S. Rogers and Harry Stormfels, Detroit, Mich., and H. W. Davenport, El Dorado, Ark.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 39)

CRANE COUNTY

Crane Dev. Co.'s No. 1 J. R. Mosley, S cor. Sec. 18, Blk. 6, H. & T. C. Sur. ..... Top salt 819 ft.; show oil 3,017 ft.; drlg. 3,050 ft.

Gulf Prod. Co.'s No. 49 J. T. McElroy, Sec. 291, Blk. F, C.C.S.D.&R.G.N.G.R.R. Sur. ..... Location.

Lockhart et al's No. 1 M. M. Treanor, Sec. 28, Blk. 1, H.&T.C. Sur. ..... Location.

CROCKETT COUNTY

V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur. ..... Shut down 2,110 ft.

Dixie Oil Co.'s No. 1 George Thompson, Sec. 72, Blk. 1 .. Location.

J. S. Cosden, Inc., No. 1 Paul Perner, SW cor. Sec. 36, Blk. 2, I. & G. N. Sur. ..... Drlg. 835 ft.

Henshaw and McMann Oil & Gas Co.'s No. 1 W. Owens, C NW Sec. 17, Blk. G.G., G.C.&S.F.R.R. Sur. ..... Drlg. 760 ft.

Humble O. & R. Co.'s No. 2 P. J. Sorg Est ..... Shut down 2,541 ft.

Van McPhail's No. 1 George Thompson ..... Location.

Van McPhail et al's No. 1 George Thompson ..... Location.

Osage Oil Corp.'s No. 2 Halff, 1,200 ft. down river from No. 1 in Sec. 70, Blk. 1, I.&G.N. Sur. ..... Total depth 1,040 ft.; shut down.

Osage Oil Co.'s No. 3 H. M. Halff, Sec. 70, Blk. 1, I.& G.N.R.R. Sur. ..... Shut down 200 ft.

W. W. Donnelly & Young's No. 1 Massey, Sec. 29, Blk. U-V ..... Shut down 520 ft.

World Oil Co.'s No. 1 Schneeman-B, Sec. 50, Blk. BB, G.C.&S.F. Sur. ..... Top salt 1,070 ft.; hole full salt water 2,210-15 ft.; set 6-in. 2,540 ft.; drlg. 2,830 ft.; hole full sulphur water; drlg. 2,900 ft.

M. B. Wyrick et al's No. 1 H. M. Halff, Sec. 68, Blk. 1, H.&G.N. ..... Shut down 330 ft.

Young & Donelly's No. 1 J. M. Shannon, C Sec. 11, Blk. 9, D.&S.E. Sur. ..... 7,000,000 ft. gas at 1,662 ft.; shut down 1,676 ft.

Young & Donnelly's No. 2 J. M. Shannon, Sec. 18, Blk. 10, G.C.&S.F.R.R. Sur. ..... Rig.

CULBERSON COUNTY

Deep Rock Oil Co.'s No. 2 Kloh-Rumsey, Sec. 21, Blk. 29, T.&P. Sur., T-1 (NE of No. 1) ..... Shut down 1,265 ft.

Hickey & Stiver's No. 1 C. O. Finley ..... Hole full fresh water; drlg. 780 ft.

Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School Blk. 97 ..... Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; run. 8-in. casing 1,767 ft.

ECTOR COUNTY

Pennsylvania Drlg. Co.'s No. 1 W. E. Connell, C NE Sec. 7, Blk. B-16 ..... Locat'on.

Shoup et al's No. 2 C. P. Davis, C Sec. 10, Blk. 42 ..... Material on ground.

EL PASO COUNTY

Ellsworth & Haunt's No. 1 McKinney & Jones ..... Drlg. water well and shut down.

FISHER COUNTY

Cranfill & Reynold's No. 1 J. A. Young, Sec. 208, B.B. B.&C. Sur. ..... Top pay 3,106 ft.; total depth 3,118 ft. sandy lime; swa bed 150 bbls. 10 hrs.; hole full oil; to drill deeper.

R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T.&P. Sur. ..... Drlg. 2,975 ft.

Sinclair Oil & Gas Co.'s No. 1 F. Steele, NW NE NE Sec. 72, Blk. 1, H.&T.C.R.R. Sur. ..... Rig.

FOARD COUNTY

Clark et al's No. 1 Atkins ..... Lime 1,580-1,930 ft.; show gas 1,885 ft.; drlg. 3,400 ft.

Fain-McGaha Oil Corp. and Roxana's No. 2 J. F. Mathews, Blk. 3, G.C.&S.F. Sur. ..... Drlg. 630 ft.

Marland Oil Co.'s No. 1 J. H. Minnick, C NE Sec. 74, Blk. B, H.&T.C. Sur. ..... Rig.

GARZA COUNTY

Emerald Oil Co.'s No. 1 Boren, NW NE Sec. 137, Blk 5.. Shut down 2,600 ft.

Emerald Oil Co.'s No. 3 Boren, C NW NE Sec. 137, Blk. 5 ..... Top salt 660 ft.; shut down repairs 2,425 ft.

Gulf Prod. Co.'s No. 1 E. P. Swenson-A, Sec. 67, Blk. 2, H.&G.N. Sur. ..... Top salt 495 ft.; top lime 2,075 ft.; half bailer sulphur water 4,835-45 ft.; drlg. gritty gray shell 4,920 ft.

Marland Oil Co.'s No. 1 B. F. Pippin, C NW Sec. 1,210 W. C. Young Sur. (3,750-ft. test) ..... Rigging.

GLASSCOCK COUNTY

Texon & Marland's No. 1 Settles ..... Set 10-in. 1,420 ft.; top lime 2,015 ft.; hole full sulphur water 2,710-50 ft.; 5-in. casing 3,210 ft.; drlg. 3,285 ft.

Josey & Finchbaugh's No. 1 S. R. Cox, 1,320 ft. W. of NE cor. and located on the N line of Sec. 29, Blk. 33, Twp. 4s. T.R.R.R. Sur. ..... Location.

Meriwether Oil Co.'s No. 1 L. S. McDowell, CNL Sec. 34, Blk. 34, T-2-S, T.P.R.R. Sur. ..... Run. 15½-in. casing 85 ft.

R. R. Penn's No. 1 Hughes & Johnson ..... Location.

HOWARD COUNTY

Bristow & Merrick's No. 5 A. J. Hooks, SE NW N half Sec. 140, Blk. 29, W.&N.W.R.R. Sur. ..... Rotary derrick.

Coyle-Concord Oil Co.'s No. 5 Dora Roberts, Sec. 156, Blk. 29, W.&N.W. ..... Cem. 6-in. casing 1,575 ft.

F. H. E. Oil Co.'s No. 1 Dora Roberts, SW NE Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Shut down 1,940 ft.

F. H. E. Oil Co.'s No. 2 Dora Roberts-D, 250 ft. N and 200 ft. W SE cor. of S 80 acres of NW Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.

F. H. E. Oil Co.'s No. 3 Dora Roberts-A, 1,170 ft. S and 1,210 ft. W NE cor. Sec. 156, Blk. 29, W.&N.W. ..... Rig.

F. H. E. Oil Co.'s No. 4 Dora Roberts-A, 1,170 ft. S and 1,710 ft. S and 1,710 ft. W NE cor. Sec. 156, Blk. 29, W.&N.W. ..... Location.

Green O. & R. Co.'s No. 1 H. R. Clay, SE cor. Sec. 127, Blk. 29, W.&N.W. Sur. ..... Drlg. 580 ft.

Henshaw et al's No. 1 W. R. Settles, SW SE SW Sec. 135, Blk. 29 ..... Hole full sulphur water 1,335-50 ft.; show oil 2,250-65 ft.; fish. bit 2,290 ft.

Lockhart et al's No. 2 Dora Roberts, Sec. 157, Blk. 29, W.&N.W. ..... Material on ground.

Magnolia Pet. Co.'s No. 7 Dora Roberts, SW NE SW Sec. 136, Blk. 29, W.&N.W. ..... Rigging.

Marland Oil Co.'s No. 1 Clay-E, NW NE SE Sec. 138, Blk. 29 ..... Pay 2,480-2,500 ft.; swabbed appro. 160 bbls.; hole full salt water 3,360-70 ft.; total depth 3,656 ft.; plugged back to 2,960 ft.; tested 5 bailers oil 2,480-2,920 ft.; shot 100 qts. 2,880-2,920 ft.; tested 10 bbls. oil and 12 bbls. water; plugged back to 2,575 ft.; to pump; pumped 65 bbls. first 24 hrs. from 2,480-2,520 ft.; may shoot.

Marland Oil Co.'s No. 1 Donnely Clay, Sec. 127, Blk. 29... Location.

Marland Oil Co.'s No. 1 Richardson, C NW Sec. 12, Blk. 32, T.&P. Sur., T-1-S ..... Top salt 370 ft.; hole full salt water 2,235-2,300 ft.; hole full sulphur water 2,790-2,800 ft. and 3,010 ft.; pulling pipe to abandon 3,618 ft.

Mays, Nixon & Flowers' No. 1 W. J. Flowers ..... Little salt at 976-97 ft.; top salt 1,114 ft.; shut down 2,100 ft.

Merrick & Lamb's No. 4 H. R. Clay, CSL SE NE Sec. 136, Blk. 29, W.&N.W. ..... Location.

Miley and Marland Oil Co.'s No. 1 C. D. Read, C NW Sec. 12, Blk. 31, T.&P. Sur., T-1-N ..... Spudded and shut down 5 ft.

Owen & Sloan's No. 3 Dora Roberts, Sec. 136, Blk. 29 .... Pumped 40 bbls. first 18 hrs. 1,322-32 ft.; shut in.

Owen & Sloan's No. 4 Dora Roberts, Sec. 136, Blk. 29.... Location.

Sun Oil Co.'s No. 1 W. R. Settles, Sec. 135, Blk. 29 ..... Top lime 2,030 ft.; swabbed 430 bbls. first 4 hrs. 2,530-40 ft.; shut down.

Sprague Oil Co.'s No. 1 Dora Roberts ..... Spudded and shut down.

Sweeney et al's No. 3 Chalk, Sec. 124, Blk. 29 ..... Location.

Sweeney et al's No. 4 Chalk, Sec. 124, Blk. 29 ..... Location.

Tate-Weekley & Tubbs' No. 3 Dora Roberts, NE cor. Sec. 156, Blk. 29, W.&N.W.R.R. Sur. ..... Cem. 6-in. 1,596 ft.; drlg. 2,070 ft.

Tate-Weekley & Tubbs' No. 4 Dora Roberts, Sec. 156, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 844 ft.

Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mrs. Connaly, NE cor. Sec. 15, Blk. 33, T.&P. Sur., T-1-N.. Top salt 1,425 ft.; hole full salt water 1,760-1,800 ft.; show oil 3,065 ft.; hole full sulphur water 3,500-55 ft.; hole full water 3,925-50 ft.; show oil 4,125-30 ft.; preparing to plug 4,400 ft.

Texon O. & L. Co. and Marland Oil Co.'s No. 2 W. R. Settles ..... Shut down for storage; sand at 1,280-84 ft.; total depth 1,298 ft.

Texon & Marland's No. 2 W. R. Settles-A ..... Rig; drlg. water well.

Weekly Oil Corp. et al's No. 1 Dora Roberts, Sec. 156, Blk. 29 ..... Drlg. 2,075 ft.

HUDSPETH COUNTY

American Land Co.'s No. 1 Lockhart and Roseborough, C SE Sec. 5, School Blk. 21 ..... Shut down 180 ft. (cor. depth); to start up soon.

Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, T.&P. Sur., T-6 ..... Shut down for socket 1,175 ft.; 1,000,000 ft. of inflammable gas at 1,130 ft.; straightening hole 1,375 ft.

Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW Sec. 12, Blk. 18 ..... Shut down 1,000 ft.

IRION COUNTY

P. F. Hill's No. 1 Horney, 150 ft. S and 450 ft. W of NE cor. SW of Sec. 2, Blk. 3, H.&T.C. Sur. ..... Hole full water 720-40 ft.; top pay 1,270 ft.; 1,170 ft.; fluid in hole; ran bailer and bailer 9 bbls. live green oil from top of hole; didn't test for water; to run 6-in. casing.

F. E. Webb et al's No. 1 J. M. Nutt ..... Spudded and shut down 125 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means ..... Shut down 2,600 ft.

Humble O. & R. Co.'s No. 2 Crecencio Flores, 1,130 ft. N and 850 ft. E of SW cor. Sec. 34, Blk. 58, T.&P. Sur., Twp. 8 ..... Shut down 3,980 ft.

JONES COUNTY

Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands ..... Drlg. 2,790 ft.; hole full water 2,770-80 ft.

Hutson & Weaver's No. 1-A Smith ..... Pumping from pay at 2,498-2,531 ft.

Midwest Exploration Co.'s No. 1 Sarah L. Phillips, SW cor. Sec. 16, Blk. 19, T.P.R.R. Sur. ..... Location.

Phillips Petroleum Co.'s No. 5 Joe Winters, NE cor. NW Sec. 19, Blk. 19, T.&P.R.R. Sur. ..... Rig.

Rhodes & Highers' No. 1 E. Howell, Sec. 20, Blk. 19, T.&P. Sur. ..... Drlg. 1,260 ft.

J. N. Sloan and others' No. 1 W. C. Bennett, NW cor. SW SE Sec. 42, Orphan Asylum Land ..... Spudded and shut down.

W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2 ..... Shut down 1,740 ft.

KENT COUNTY

Marland and Texon's No. 1 Bilby ..... Top salt 610 ft.; drlg. 1,505 ft.

KNOX COUNTY

Deep Rock Oil Co.'s No. 1 Moore ..... Drlg. 1,000 ft.

Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 2,500 ft. W of NE cor. Sec. 31, Blk. 4 ..... Shut down 3,512 ft.; may deepen to 4,000 ft.

LOVING COUNTY

Delaware Oil Co.'s No. 1 Lockhart & Ramsey ..... Top salt 780 ft.; drlg. 815 ft.

Lockhart & Co.'s No. 1-A Lepp, Sec. 85, Blk. 33 ..... Location.

Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 53, T-2, T.&P. Sur., elev. 2,934 ..... Top salt 955 ft.; half bailer sulphur water per hr. 3,600 ft.; water exhausted; fishing for tools 4,350 ft.

LYNN COUNTY

Elpo Oil Co.'s No. 1 Nevols, NW cor. Sec. 6, Blk. C-42, School Lands ..... Moving in heavy rotary.

Hart Oil Corp.'s No. 1 C. O. Edwards A-1 ..... Shut down 576 ft.

MENARD COUNTY

Carpenter & Robbins' No. 1 Kothman, NW cor. SW SW Sec. 22 ..... 165 ft. 34-6 grav. oil at 414-15 ft.; fishing 415 ft.

J. C. Barnett and T. H. Drake's No. 1 Callan City Co. Ranch, Sec. 22 ..... Shut down 520 ft.

May & Clark's No. 1 Collen, Sec. 22, B.S.&F. ..... Shut down 505 ft.

Renfro et al's No. 1 J. Davis ..... Shut down 260 ft.

MIDLAND COUNTY

Gholson et al's (was Orbit Oil Co.'s) No. 1 Moreland, C SE Sec. 17, Blk. 39, T.&P. Sur., T-1-S ..... Top salt 1,910 ft.; drlg. 2,880 ft.

Shoup et al's No. 1 Roy Parks ..... Spudded and shut down.

MITCHELL COUNTY

Boehm Drilling Co.'s No. 1 Harry Hyman, C NW SE Sec. 90, Blk. 29, W.&N.W. Sur. ..... Shut down 505 ft.

California Oil Co.'s No. 8 C. M. Adams, Lease No. 2, CSL NE NW Sec. 11, Blk. 28, Twp. 1n, T.&P.R.R. Sur..... Rig.

Magnolia Oil Co.'s No. 5 Foster, Sec. 17, Blk. 29, T.&P.... Cleaning out 1,560 ft.

Paul Teas et al's No. 1 A. C. Mills, NW cor. C. A. O'Keefe Sub. 11, J. P. Smith Sur. ..... Total depth 1,766 ft. (s.l.); plugged back to 1,650 ft.; shot 200 qts. 1,550-1,640 ft.; cleaning out.

Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T.&P. Sur., T-1-N ..... Total depth 2,503 ft.; shut down.

PECOS COUNTY

Benedum & Trees' No. 1 B. T. Corder ..... Spudded and shut down.

Bob Elmore's No. 2 Holmes, SE cor. Sec. 45, Blk. 1, I.&G.N. Sur. ..... Top salt 435 ft.; shut down 990 ft.

Buell & Hagan's No. 1 Pryor & Wilson, Sec. 15, Blk. 5 .. Drlg. 570 ft.

Diamond Pet. Co.'s No. 1 Blackstone & Slaughter ..... Moving in material.

M. C. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, H.&G.W. Sur., elev. 2,555 ft. ..... Shut down 640 ft.

Ditto Oil Co.'s No. 1 J. M. Montgomery, Sec. 104, Blk. 331, A-6,387 ..... Location.

Furman Oil Co.'s No. 1 T. W. McNear, Jr., Sec. 46, Blk. 9 ..... Moving in material.

Everett et al's No. 1 J. Fields ..... Spudded and shut down.

Gibson Oil Corp.'s No. 1 R. R. Russell, Sec. 69, Blk. 3, C.C.S.D.&R.G.N.G. Sur. ..... Drlg. 1,980 ft.

Kershaw & Livingston's No. 1 Cannon, Sec. 54, Blk. A-2.. Drlg. 1,365 ft.; top salt 1,050 ft.; shut down 2,000 ft.

Mid-Kansas O. & G. Co.'s No. 1 Pryor & Wilson, NW cor. Sec. 3, Blk. 5, T.C.R.R. Sur. ..... Drlg. 580 ft.

Miller & McNees' No. 1 W. C. Tyrrell ..... Cellar.

Phillips Pet. Co.'s No. 1 Nutt, SE cor. Sec. 8, Blk. 125 ... Building rig.

B. J. Spikes' No. 1 George Brown ..... Drlg. 645 ft.

Rowan & Tong's No. 1 Scharff & Blackman, Sec. 4, Blk. 9 ..... Spudding.

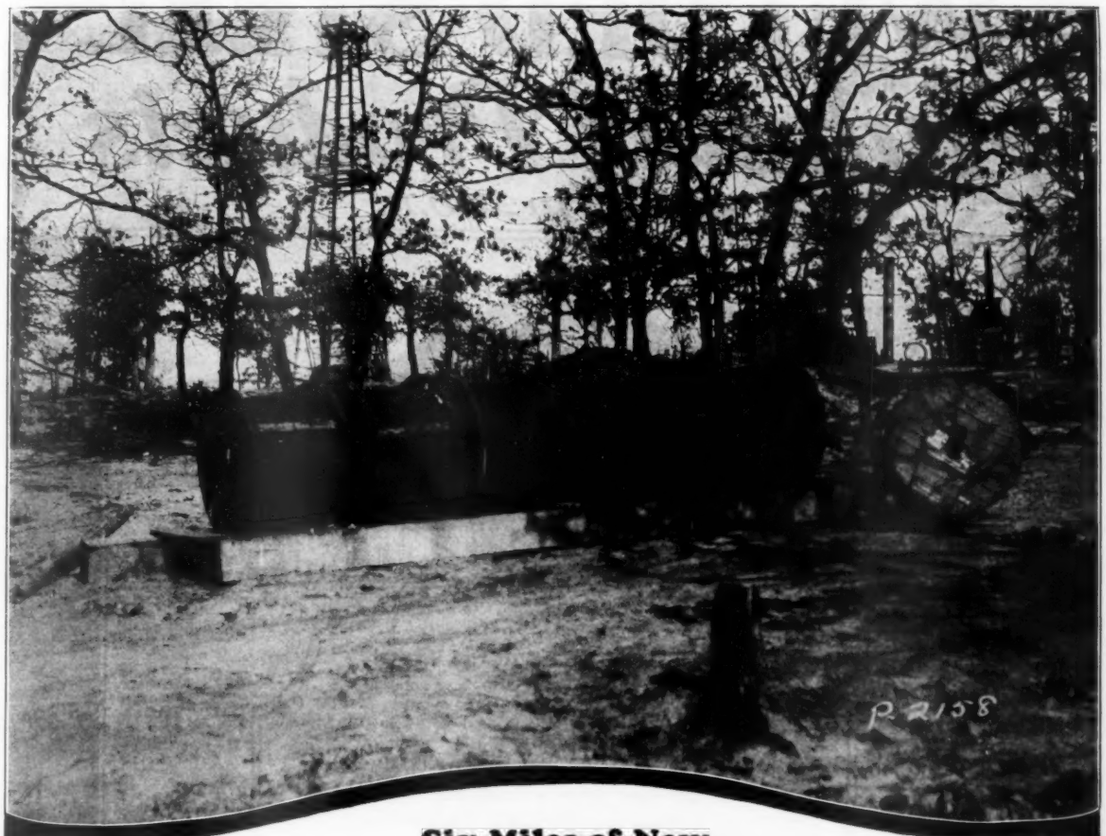
Roxana Pet. Corp. and Kirby Pet. Co.'s No. 1 University, Sec. 23, Blk. 26 ..... Rig on ground.

Stidham & Thrasher's No. 1 Belgrade Ranch Co., Sur. 3, Mrs. S. Tompkins A-4,695 ..... One bailer sulphur water per hr. 1,310-15 ft.; shut down 1,650 ft.; flowing sulphur water from 1,620 ft.

Transcontinental Oil Co.'s No. 1 University, NE NW SW Sec. 18, Blk. 18 ..... Drlg. 498 ft.

Vacuum Oil Co.'s No. 1 Elsinore Cattle Co., Sec. 60, Blk. D, G.C.&S.F. Sur. ..... Drlg. 1,300 ft.

World Oil Co.'s No. 1 Kloh, Sec. 47, Blk. 45, Twp. 8, T.P.R.R. Sur., elev. 2,810 ft. ..... Underreaming 915 ft.



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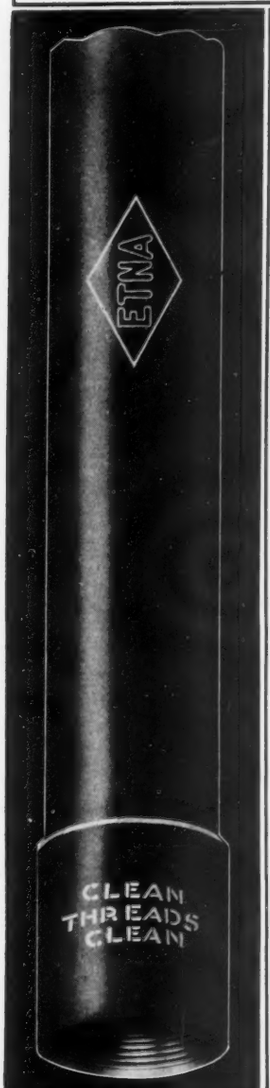

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ESTABLISHED 1828

World Oil Co.'s No. 1 Serf, C NE Sec. 10, Blk. 130, T.&St.L. Sur., elev. 3,435 ft. — To run 8¼-in. casing 1,500 ft.

Yates Pool, Pecos County

Pandem Oil and Gibson Oil Co.'s (was Allsman & Bell's) No. 6 River Bed — Rig.

Pandem Oil and Gibson Oil Co.'s (was Allsman & Bell's) No. 8 River Bed — Hole full of fluid, 35 per cent water; shut down 1,095 ft.

Pandem Oil and Gibson Oil Co.'s (was Allsman & Bell's) No. 9 River Bed — Location.

Pandem Oil and Gibson Oil Co.'s (was Allsman & Bell's) No. 12 River Bed — Top pay 1,056 ft.; shut down 1,100 ft.; flowed 25 bbls. daily.

Pandem Oil and Gibson Oil Co.'s (was Allsman & Bell's) No. 13 River Bed — Location.

Pandem Oil and Gibson Oil Co.'s No. 14 River Bed — Location.

Pandem Oil and Gibson Oil Co.'s No. 15 River Bed — Location.

California Co.'s No. 2 Yates, Sec. 34, Blk. 194 — Rig.

California Oil Co.'s No. 14 I. G. Yates, Lease 1, Sec. 34, Blk. 194 — Cem. 8¼-in. casing 1,030 ft.

California Oil Co.'s No. 15 I. G. Yates, Lease 1, Sec. 34, Blk. 194 — Shut down 550 ft.

California Oil Co.'s No. 16 I. G. Yates, Lease 1, Sec. 34, Blk. 194 — Drlg. 700 ft.

California Co.'s No. 2 M. A. Smith, Lease 1, Sec. 37, Blk. 194, G.C.&S.F. — Location.

California Co.'s No. 12 Smith, Lease 3 — Shut down 1,185 ft.

Day Bros. & McKnight's No. 1 Yates, NW cor. Sec. 58, Blk. 1 — Top salt 440 ft.; 1,000,000 ft. gas 1,255 ft.; shut down 1,400 ft.; flowing sulphur water.

Douglas Oil Co.'s No. 2 J. T. Sellman — Hole full salt water 795-860 ft.; 25 ft. sulphur water 1,614-15 ft.

Gulf Prod. Co.'s No. 8 I. G. Yates, Runnels Co. School Land No. A-2,169 — Pumped 285 bbls. 11 hrs. from sand 405-49 ft. showing 17 per cent b.s. and water which treats out 18-gravity oil; cem. 8¼-in. casing 859 ft.

Humble O. & R. Co.'s No. 7 M. A. Smith, SW cor. NW Sec. 36, Blk. 194 — Drlg. 675 ft.

Kirby Petroleum Co.'s No. 1 J. H. Tippett, CWL E half W half Sec. 40, Blk. 194 — Drlg. 100 ft.

McDonald et al's No. 1 A. A. Parsell, C NW SE Sec. 28, Blk. A, G.C.&S.F.R.R. Sur. — Drlg. 100 ft.

McMan and Marland's No. 16 Yates — Rig.

Marland Oil Co.'s No. 11 Yates-A — Location.

Marland Oil Co.'s No. 12 Yates-A — Location.

Marland Oil Co.'s No. 13 Yates-A — Location.

Michaelson & Tabot's No. 1 River Bed — Drlg. 275 ft.

Mid-Kansas and Transcontinental's No. 14 Yates-A, Sec. 33, Blk. 194, G.C.&S.F. Sur. — Waiting on machine.

Mid-Kansas and Transcontinental's No. 15 Yates-A — Top pay 1,305 ft.; drlg. 1,355 ft.; flowed 2,257 bbls. 12 hrs.

Mid-Kansas and Transcontinental's No. 16 Yates-A — Top pay 1,168 ft.; drlg. 1,235 ft.; flowed 1,797 bbls. 15 hrs.

Mid-Kansas and Transcontinental's No. 17 I. G. Yates-A, Sec. 31, Blk. 194 — Location.

Mid-Kansas and Transcontinental's No. 18 Yates-B — Show oil 1,095 ft.; flowed sulphur water 1,108 ft.; plugged back to 1,087 ft.; 400 ft. water; 300 ft. oil in hole.

Mid-Kansas and Transcontinental's No. 22 Yates-B — Drlg. 1,205 ft.

Mid-Kansas and Transcontinental's No. 6 Yates-C — Rigging up.

Mid-Kansas and Transcontinental's No. 10 Yates-C — Location.

Mid-Kansas and Transcontinental's No. 1 Yates-F — Top pay 1,152 ft.; shut down 1,324 ft.; flowed 990 bbls. in 10 hrs.

Mid-Kansas and Transcontinental's No. 1 I. G. Yates-G, Sec. 34½, Blk. 194 — Cellar.

Mid-Kansas and Transcontinental's No. 9 Smith-Taylor — Waiting on machine.

Mid-Kansas and Transcontinental's No. 10 Smith-Taylor — Top pay 1,264 ft.; shut down 1,465 ft.; flowed 2,897 bbls. in 9 hrs.

Mid-Kansas and Transcontinental's No. 11 Smith-Taylor — Top pay 1,285 ft.; drlg. 1,364 ft.; flowed 550 b.in. in 13 hrs.

Mid-Kansas and Transcontinental's No. 12 Smith-Taylor — Top pay 1,310 ft.; flowed 2,110 bbls. 6 hrs.; drlg. 1,418 ft.

Mid-Kansas and Transcontinental's No. 13 Smith-Taylor — Fishing 715 ft.

Mid-Kansas and Transcontinental Co.'s No. 14 Smith-Taylor, Sec. 33, Blk. 194, G.C.&S.F.R.R. Sur. — Drlg. 400 ft.

Oregon Oil Corp.'s No. 1 Yates — Shut down 1,150 ft.

Phillips Pet. Co.'s No. 1 Mrs. M. A. Smith, Sec. 39, Blk. 194, G.C.&S.F. Sur. — Top pay 1,255 ft.; shut down 1,380 ft.; flowed 150 bbls. 18 hrs.

Skelly Oil Co.'s No. 1 J. H. Tippett, Runnels County School Land A-2,169, Sec. 108, Blk. 194, G.C.& S.F.R.R. — Drlg. 1,225 ft.

PRESIDIO COUNTY

Headlock & Miller's No. 1 Tootle Est., Sec. 123, Blk. 3, D.&P. Sur., elev. 2,912 ft. — Salt water 2,610 ft.; total depth 3,003 ft.; shut down for orders.

Pinto Canyon Oil Co.'s No. 1 Fields, 1,760 ft. S and E NW cor. Sec. 74, Blk. 2, D.&P. Sur. — Location.

REAGAN COUNTY

California Oil Co.'s No. 4 University, NW cor. Sec. 3, Blk. 7 — Drlg. 1,135 ft.

Hagan & Emch's No. 1 E. W. Loftin, C E half Sec. 1,271, D.&S.E. Sur. — Top salt 1,065 ft.; drlg. 2,425 ft.

Marland Oil Co.'s No. 1 University, SE cor. SW Sec. 26, Blk. 8 — Drlg. 730 ft.

Moody Oil Co.'s No. 1 R. A. Walters — Rig.

Roxana Pet. Co.'s No. 1 Sawyer Cattle Co., 3,000 ft. S of CNL Sec. 15, Blk. A, R. Casey Sur. — Top salt 1,105 ft.; drlg. 1,200 ft.

Skelly Oil Co.'s No. 2 University, SE SW SE Sec. 35, Blk. 8 — Rig.

The Texas Company's No. 3 J. D. Sugg, C Sec. 165, Blk. 2, T.&P.R.R. Sur. — Top salt 990 ft.; drlg. 1,675 ft.

Texon O. & L. Co.'s No. 1-B University, Group 1 — Top pay 6,250 ft.; 2,000 ft. oil; drlg. black lime and shale 7,760 ft.

White et al's No. 1 Shofner & Sterling, NE cor. NW Sec. 10, 2 m. N of Big Lake — Top salt 1,275 ft.; hole full fresh water 2,155 ft.; run 8-in. 2,175 ft.; shut down 2,495 ft. for 6-in. casing.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. — Show oil 1,105-10 ft.; hole full sulphur water 1,600 ft.; water shut off; underreaming 8¼-in. casing 1,930 ft.

Grisham-Hunter Corp.'s No. 1 Rathge & Connor, 600 ft. from N lins and 5,760 ft. from W line of Sec. 26, Blk. 2, H.&G.N. — Top salt 1,037 ft.; run. 10-in. casing. 1,239 ft.

David R. Thompson's No. 1 A. A. Eddins — Total depth 5,130 ft.; shut down; to drill deeper.

Vacuum Oil Co.'s No. 1 Grisham-Hunter — Set 15½-in. casing 533 ft.; set 12½-in. 1,025 ft.; drlg. 1,631 ft.

World Oil Co.'s No. 1 Duff, 1,500 ft. from S and 850 ft. from NE lines, R. S. Johnson Sur. No. 68, elev. 2,774 ft. — Top Delaware lime 4,185 ft.; hole full brackish salt water 4,362-4,500 ft.; plugged back to 4,237 ft.; shot 70 qts. 4,135-4,235 ft.; little oil in hole; shut down 4,500 ft.; moved tools to No. 1 Biggs.

RUNNELS COUNTY

Empire G. & F. Co.'s No. 1 C. C. Gray, Sec. 147, E.T.R.R. Sur. — Hole full fresh water 2,250-57 ft.; small show oil 2,460-90 ft.; shut down for orders 2,602 ft.

Gibson & Johnson's No. 1 Harris Est., Juliana Voske Cabrera Sur. — Location.

Gibson & Johnson's No. 1 H. P. Serratt, C SE NW Sec. 156, E.T.R.R. Sur. — Drlg. 1,510 ft.

Globe Oil Co.'s No. 1 J. H. Webb — Drlg. 1,465 ft.

Jones Oil Syndicate's No. 1 W. Hale — Fish. pipe 1,905 ft.

Jones Oil Syndicate's No. 1 W. Hale (Runnels), NE cor. Sub. 29, Sec. 109, E.T.R.R. Co. Sur. — New location.

McLean et al's No. 1 G. W. Clayton — Run 10-in. casing 1,050 ft.

Marland Oil Co.'s and E. L. Smith Oil Co.'s No. 1 A. C. Herring, C Sec. 121, E.T.R.R. Sur. (3,000-ft. test) — Drlg. 200 ft. (cor.).

Marland Oil Co.'s No. 1 R. R. Russell, near CSL J.F.G. Sur. — Rigging.

Kennedy et al's No. 1 J. E. Tally — Shut down 1,720 ft.

May et al's No. 1 J. M. Schneider, John Wall Sur. — ½ baller salt water 1,033 ft.; hole full water 1,100-20 ft.; fishing 1,770 ft.

Miles Oil Co.'s No. 1 Charles Ray, Sec. 21, T.&N.O. Sur. — Cellar and machine.

Miles Oil Co.'s No. 1 L. S. Lawhon, NE cor. Sec. 68. — Show gas 960-80 ft.; drlg. 2,370 ft.

Royal Pet. Co.'s No. 1 A. C. Willingham — reparing to run 10-in. 1,410 ft.

Sillix Pet. Co.'s No. 1 Malone — Location.

R. B. Summers et al's No. 1 J. W. Reese, M. J. Parramore Sur. No. 26 — Drlg. 600 ft.

Swensondale Oil Co.'s No. 1 E. A. Werner — Hole full water 2,000 ft.; Drlg. 2,215 ft.

Vacuum Oil Co., Lou Ladd et al's No. 1 J. S. Flanagan, NW cor. Subdivision No. 29, Domingo Diaz Sur. No. 532 — Location.

Vacuum Oil Co. et al's No. 1 H. B. Fowler, subdivision No. 23, Domingo Diaz Sur. No. 532 — Cellar.

Watchorn O. & G. Co.'s No. 1 J. L. King — Hole full salt water, 1,633-91 ft.; drlg. 2,800 ft.

SCHLEICHER COUNTY

Beavers & Leath et al's No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T.O. Sur. — Shut down 400 ft.

SCURRY COUNTY

J. B. Mims et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C. Sur. — Tearing down rig to move to new location.

STERLING COUNTY

Orr et al's (to be taken over by Empire G. & F. Co.) No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W.&N.W Sur. — Shut down 1,390 ft. (cor.).

SUTTON COUNTY

J. D. Nantz et al's No. 1 G. Allison, C NE Sec. 29, Blk. B, H.E.&W.T.R.R. Sur. — Location.

National Potash Co.'s No. 1 J. N. Ross — Shut down 991 ft.

TAYLOR COUNTY

A. J. Brown et al's No. 1 Hensley, NE cor. Sec. 5, Blk. 4, S. .R.R. Sur. — Shut down 2,935 ft.

Dorning & Perrine's No. 1 J. A. Hammer, C N 100 acres, Sec. 23, Blk. 19, T.&P. Sur., elev. 1,904 ft. — Shut down 455 ft.

Gilbert Johnson and Day Bros.' No. 1 C. M. Brown, Sec. 1, Blk. 6, T.&P. Sur. — Hole full water 2,170-2,220 ft.; cased off; drlg. 2,800 ft.

Owen & Sloan's No. 1 Lattimer, Sec. 14, Blk. 9, T.&P. Sur. — Cleaning out 2,985 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett — Location.

Champlin Ref. Co.'s No. 1 Corder, C Sec. 110, Blk. 1, C.C.S.D. Sur. — Set 15½-in. 625 ft.; drlg. 1,810 ft.

Deep Rock Oil Co.'s No. 1 H. C. Nolke, Sec. 4, Blk. A-2, T.C.R.R. Sur. — Underreaming 1,090 ft.

Humble Oil Co.'s No. 1 University, Sec. 15, Blk. 34 — Shut down for 10-in. 1,375 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Blk. D-7, E.L.&R.R. Sur. — Moving in material.

Milham Exploration Co.'s No. 1 Bassett, Sec. 77, Blk. Y, W. H. Robertson Sur. — Run. 8-in. 1,788 ft.; fish. 2,409 ft.

Bryan and Breen's No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, Texas-Mex. R.R. Sur. — Location.

Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.R.G.&N.G.R.R. Sur. — Rig.

TERRY COUNTY

Kingsland O. & P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. — Drlg. 3,990 ft.

TOM GREEN COUNTY

George Amery's No. 1 Wilkey, C SW Sec. 3, H.&A.L. Sur. — Location.

Collins et al's No. 1 Jones, CSL Sec. 646, Shaffer Sur. — Rig.

Cox et al's No. 1 Llano — Shut down 610 ft.

Fitzgerald & Taliaferro's No. 1 Bennett — Shut down 1,955 ft.

Lone Eagle Oil Co.'s No. 1 Sharp, SE W Elzel Sur. No. 167 — Rig.

Marland Oil Co.'s No. 1 J. W. Johnson-A — Fishing 3,130 ft.; setting 6-in. casing 3,173 ft.; cleaning out 3,288 ft.

Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 163, Blk. 11, S.P.R.R. Sur. — Shut down 1,020 ft.

Haubelt et al's No. 1 Johnson — Location.

Haubelt et al's No. 2 Johnson — Shut down 1,201 ft.

World Oil Co.'s No. 1 Mrs. F. T. March — Location.

World Oil Co.'s No. 2 Pulliam, Sec. 25, Blk. 4, H.&T.C. Sur., elev. 1,823 ft. — Set 8-in. casing 655 ft. and shut down.

UPTON COUNTY

Mark Curtis et al's (was Hultz et al's) No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton C. School Land, League 1, elev. 2,757 ft. — Shut down 975 ft.

Penn and Atlantic's No. 1 Live Stock Exchange, Sec. 34, Blk. 38 — Building rig.

Snowden & McSweeney's No. 2 Ed S. Hughes, Sec. 9, Blk. 3½, C.C.S.D.&R.G.N.G.R.R. Sur. — Location.

The Texas Company and Coruova Union's No. 1 Union Land, Sec. 23, Blk. 35, H.&T.C. — Top pay 2,098 ft.; swabbed 60 bbls. in 36 hrs. at 2,271 ft., 2 per cent water; 2,200 ft. sulphur water 2,390-2,405 ft.; total depth 3,201 ft.; plugged back to 3,350 ft. and lost baller; fishing.

Wise & Jackson's No. 1 J. H. Porter, SW cor. SW SW Sec. 134, Blk. E, elev. 2,592 ft. — Top pay 3,419 ft.; total depth 3,517 ft., gray lime; shut down.

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore Est., Sec. 183, J. Mitchell Sur., elev. 953 ft. — Shut down 3,000 ft.

Curse Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G.H.&S.A. Sur. — Shut down 2,940 ft.

East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur., elev. 941 ft. — Total depth 3,190 ft.; shut down.

Magnolia Pet. Co.'s No. 1 Whitehead, Sec. 51, D.G.C. &S.F. Sur., elev. 1,770 ft. — Drlg. 6,320 ft.

Independent Operator's No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. — Shut down 2,900 ft.

O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. — Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; shut down 4,210 ft.

W. B. Thraves et al's No. 1 W. E. Wilson — Shut down 905 ft.

WARD COUNTY

Alfredo Del Cambre's No. 1 Lee Monroe, Sec. 50, Blk. 33, H.&T.C. Sur. — Spudded and shut down.

E. H. Devore et al's No. 1 Black, Sec. 214, Blk. 34, H.&T.C. Sur. — Spudded and shut down.

Estex Oil Co.'s No. 1 W. A. Estes, Sec. 4, Blk. B-29, 3,500-foot test — Moving in material.

Great Basin Oil Co.'s No. 1 Davis, C SW S half Sec. 32, Blk. 1, H.&G.N. — Cellar.

Selby Oil Co. et al's No. 1 A. G. Dooley et al, Sec. 85, Blk. A, G.M.M.&A. Sur. — Drlg. 960 ft.

WINKLER COUNTY

Amerada Pet. Corp.'s No. 1 J. B. Walton, SW cor. NW Sec. 48, Blk. 26, elev. 2,833 ft. — Rerun 8-in.; water shut off; making 15,000,000 ft. gas and slight spray oil; drlg. cavings 2,440 ft.

Atlantic O. P. Co.'s No. 2 Grisham-Hunter-A, Sec. 34, Blk. B-5 — Shot 480 qts. 2,850-2,999 ft.; shot 960 qts. 2,800-2,991 ft.; no results; total depth 3,000 ft.; moving in rotary.

Atlantic O. P. Co.'s No. 5 Grisham-Hunter-"A", SW NE SW Sec. 34, Blk. B-5 — Top salt 1,610 ft.; top lime 2,486 ft.; set 8¼-in. casing 2,485 ft.

Atlantic O. P. Co.'s No. 6 Grisham-Hunter, NW cor. SE SW Sec. 34, Blk. B-5 — Top salt 1,400 ft.; top lime 2,486 ft.; set 8¼-in. casing 2,480 ft.

Atlantic O. P. Co.'s No. 7 Grisham-Hunter-A, NE SE E half, SW Sec. 34, Blk. B-5 — Rigging up rig.
Atlantic O. P. Co.'s No. 8 Grisham-Hunter-A, SE NE E half SW Sec. 34, Blk. B-5 — Building rig.
Atlantic O. P. Co.'s No. 2 Grisham-Hunter-E, NW cor. Sec. 41, Blk. B-5 — New location.
Atlantic O. P. Co.'s No. 3 Grisham-Hunter-"E", CNL N half NE Sec. 41, Blk. B-5 — Location.
Atlantic O. P. Co.'s No. 4 Grisham-Hunter-E, SE NE NE Sec. 41, Blk. B-5 — Top salt 1,274 ft.; drlg. 2,110 ft.
Atlantic O. P. Co.'s and Collett's No. 3 Hendrick-F, NW NE NW Sec. 40, Blk. 46 — Junked; skidded 50 ft. west.
Atlantic and Collett's No. 4 Hendrick-F, NE NW Sec. 40, Blk. 26 — Rigging up rig.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter-C (was Lemar) SW cor. Sec. 40, Blk. B-5 — Total depth 2,978 ft.; gas pressure split connections; est. 75,000,000 ft. gas; running wild; trying to kill gas; top salt 1,573 ft.; top lime 2,200 ft.
Atlantic O. P. Co.'s No. 3 Ida Hendricks-D, NW SE NW Sec. 29, Blk. B-5 — Top salt 1,415 ft.; drlg. 2,487 ft.
Atlantic O. P. Co.'s No. 4 Ida Hendricks-D, NE SW NW Sec. 29, Blk. B-5 — Top salt 1,536 ft.; drlg. 2,189 ft.
Atlantic O. P. Co.'s No. 5 Ida Hendricks-D, SW SE S half NW Sec. 29, Blk. B-5 — Rigging up rig.
Atlantic O. P. Co.'s No. 6 Hendricks-D, Sec. 29, Blk. B-5 — Building rig.
Atlantic O. P. Co.'s No. 7 Hendricks-D, Sec. 29, Blk. B-5 — Location.
Atlantic O. P. and Collett's No. 2 Ida Hendricks-F — Top salt 1,984 ft.; top lime 2,458 ft.; set 8¼-in. casing 2,475 ft.
V. T. Bolin et al's No. 1 Brown — Drlg. 318 ft.
Danciger et al's No. 1 John Sealy, SW cor. NE Sec. 93, Blk. A, G.M.M.B.&A. Sur. — Rig.
Gibson-Johnson's No. 1 Lack, C SW Sec. 3, Blk. 74 — Top salt 1,980 ft.; set 8¼-in. casing, 2,701 ft.
Gulf Prod. Co.'s No. 2 T. G. Hendricks, NE NW NW Sec. 34, Blk. B-5 — Rig standing.
Gulf Prod. Co.'s No. 8 T. G. Hendricks, Sec. 34, Blk B-5 — Show oil and gas in lime 2,433 ft.; top lime 2,480 ft.; brown lime 2,610 ft.; casing trouble.
Gulf Prod. Co.'s No. 9 T. G. Hendricks, Sec. 34, Blk. B-5 — Top salt 1,837 ft.; top lime 2,558 ft.; top pay 2,824 ft.; drlg. 2,835 ft.; 1,000 ft. oil in hole.
Gulf Prod. Co.'s No. 11 T. G. Hendricks, Sec. 34, Blk. B-5 — Top salt 1,625 ft.; cem. 8¼-in. casing 2,455 ft., brown lime.
Gulf Prod. Co.'s No. 12 T. G. Hendricks, Sec. 34, Blk. B-5 — Drlg. 2,050 ft.
Gulf Prod. Co.'s No. 13 T. G. Hendricks, Sec. 40, Blk. B-5 — Top salt 1,340 ft.; top lime 2,244 ft.; drlg. brown lime 2,390 ft.
Gulf Prod. Co.'s No. 15 T. G. Hendricks, C NW SW NW Sec. 40, Blk. B-5 — Drlg. anhydrite 1,075 ft.
Humble O. & R. Co.'s No. 1 Hendricks-C, SE cor. Sec. 32, Blk. 26 — Drlg. 1,150 ft., sandy lime.
Humble O. & R. Co.'s No. 1 J. B. Walton-B, SE cor. N half Sec. 47, Blk. 26 — Derrick.
Humble O. & R. Co.'s No. 1 J. B. Walton-A, NW cor. Sec. 48, Blk. 26 — Derrick.
Humble O. & R. Co.'s No. 2-A, Sec. 34, Blk. B-5 — Top salt 1,340 ft.; top lime 2,228 ft.; shut down 2,500 ft.
Humble O. & R. Co.'s No. 3 Grisham-Hunter, Sec. 34, Blk. B-5 — 5,000,000 ft. gas from 2,195 ft.; spraying 100 bbls. 2,896 ft.; killing well to deepen; total depth 2,898 ft.; shut down.
Humble O. & R. Co.'s No. 6 Grisham-Hunter — Top salt 1,720 ft.; top lime 2,440 ft.; top pay 2,808 ft.; total depth 2,811 ft.; est. 350 bbls.
Humble O. & R. Co.'s No. 7 Grisham-Hunter — Top salt 1,240 ft.; total depth 2,364 ft.; shut down Xmas tree.
Humble O. & R. Co.'s No. 8 Grisham-Hunter — Top salt 1,240 ft.; top lime 2,323 ft.; drlg. 2,506 ft.
Humble O. & R. Co.'s No. 9 Grisham-Hunter, NE NE Sec. 34, Blk. B-5 — Derrick.
Humble O. & R. Co.'s No. 11 Grisham-Hunter, SW cor. W halfNW Sec. 41, Blk. B-5 — Derrick.
Humble O. & R. Co.'s No. 12 Grisham-Hunter, NE SW NE Sec. 34, Blk. B-5 — Location.
Humble O. & R. Co.'s No. 13 Grisham-Hunter, NW SE NE Sec. 34, Blk. B-5 — Location.
Humble O. & R. Co.'s No. 4 Ida Hendricks-B, SE N half SE Sec. 29, Blk. B-5 — Top salt 1,200 ft.; drlg. 2,610 ft., sandy lime.
Humble O. & R. Co.'s No. 5 Ida Hendrick-"B", NW NE SE Sec. 29, Blk. B-5 — Top salt 1,250 ft.; drlg. 2,520 ft., anhydrite.
Humble O. & R. Co.'s No. 6 Ida Hendrick-"B", NE NW SE Sec. 29, Blk. B-5 — Top salt 1,345 ft.; drlg. 2,114 ft.
Independent O. & G. Co.'s No. 3 Grisham-Hunter, SE NW SW Sec. 34 — Drlg. 1,390 ft.
Independent O. & G. Co.'s No. 4 Grisham-Hunter, NE SW SW Sec. 34 — Top salt 1,480 ft.; drlg. 2,553 ft.
Independent O. & G. Co.'s No. 3 Vardeman-B, SE NE NW Sec. 41, Blk. B-5 — Top salt 1,340 ft.; top lime 2,328 ft.; drlg. 2,540 ft.
Independent O. & G. Co.'s No. 4 Vardeman-B, SW cor. E half NW Sec. 41, Blk. B-5 — Top salt 1,552 ft.; top lime 1,552 ft.; drlg. 2,380 ft.
Independent O. & G. Co.'s No. 5 Vardeman-B, NW SE NW Sec. 41, Blk. B-5 — Top salt 1,570 ft.; drlg. 1,798 ft.
Independent O. & G. Co.'s No. 1 E. W. Cowden, SE NW NW Sec. 36, Blk. B-5 — Straightreaming 2,440 ft.; total depth 2,540 ft.
Liner Drlg. Co.'s No. 1 Seth-Campbell, NE cor. Sec. 2, Blk. B-5 — Shut down 450 ft.
Landreth and Roxana's No. 2 Ida Hendricks-A, Sec. 29, Blk. B-5 — Top salt 1,440 ft.; drlg. 2,671 ft.
Landreth and Roxana's No. 5 Ida Hendrick-A, NW NE SW Sec. 29, Blk. B-5 — Drlg. 1,031 ft.
Landreth and Roxana's No. 6 Hendricks-A, Sec. 29, Blk. B-5 — Building rig.
Llano Oil Co.'s No. 1 F. B. Armstrong, at common cor. Secs. 12, 13, 18 and 19, Blk. B-6, School Land — Location.
Marland Oil Co.'s No. 1 T. G. Hendricks, SE cor. W half Sec. 33, Blk. 26 — Lost returns; 616 ft. mixing mud.
Marland Oil Co.'s No. 2 T. G. Hendricks, NE SE SE Sec. 33, Blk. 26 — Cellar.
Marland Oil Co.'s No. 3 T. G. Hendricks, NE SE SW Sec. 33, Blk. 26 — New location.
Magnolia Pet. Co.'s (was G. M. Church et al's) No. 2 Ida Hendricks — Show oil 2,750 ft.; top pay 2,865 ft.; total depth 2,961 ft.; ran 5-in. with packer to 2,955 ft.; failed to shut off water; plugging back.
Magnolia Pet. Co.'s No. 5 Ida Hendricks — Top salt 1,624 ft.; top lime 2,509 ft.; drlg. lugs 2,926 ft.
Magnolia Pet. Co.'s No. 6 Ida Hendricks, Sec. 29, Blk. B-5 — Top salt 1,430 ft.; top lime 2,420 ft.; top pay 2,750 ft.; underreaming 2,809 ft.
Magnolia Pet. Co.'s No. 7 Ida Hendricks — Top lime 2,448 ft.; bailing casing 2,700 ft.
Magnolia Pet. Co.'s No. 8 Ida Hendricks — Top salt 1,510 ft.; set 8¼-in. casing, 2,510 ft.
Murchison Oil Co. et al's No. 1 Grisham-Hunter-B, NE cor. SW SW Sec. 35, Blk. B-5 — Top salt 1,335 ft.; shut down 2,427 ft.
Murchison Oil Co. et al's No. 2 Grisham-Hunter-B — Location.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 4 Grisham-Hunter-B — Top lime 2,500 ft.; top salt 1,394 ft.; drlg. 3,012 ft.
Mining & Engineering Co.'s No. 1 T. G. Hendricks, Sec. 10, Blk. B-12 — Hole full fresh water; shut down 1,232 ft.
Murchison Oil Co. and Cranfill Bros.' No. 2 Grisham-Hunter-A — Location.
Murchison Oil Co. and Cranfill Bros.' No. 4 Grisham-Hunter — Location.

Pure Oil Co.'s No. 4 Hendricks — Top lime 2,402 ft.; setting 8¼-in. casing 2,404 ft.
Pure Oil Co.'s No. 5 Hendricks — Top salt 1,643 ft.; top lime 2,461 ft.; drlg. 2,471 ft.
Pure Oil Co.'s No. 4 Hendricks-B — Top lime 2,404 ft.; top salt 1,504 ft.; drlg. 2,595 ft. in lime.
Pure Oil Co.'s No. 5 Hendricks-B, SE SW SE Sec. 34, Blk. B-5 — Top lime 2,420 ft.; top salt 1,412 ft.; drlg. 2,475 ft. in lime.
Pure Oil Co.'s No. 6 Hendricks-B — Top salt 1,315 ft.; top lime 2,382 ft.; drlg. bad hole 2,446 ft.
Pure Oil Co.'s No. 7 Hendricks-B, NE SE SE Sec. 34, Blk. B-5 — Drlg. 165 ft.
Pure Oil Co.'s No. 8 Hendricks-B, SE NE SE Sec. 34, Blk. B-5 — Spudded and shut down.
Pure Oil Co.'s No. 9 Hendricks-B, NW NE SE Sec. 34, Blk. B-5 — Rigging up rig.
Pure Oil Co.'s No. 10 Hendricks-B, NE NW SE Sec. 34, Blk. B-5 — Rigging up rig.
Pure Oil Co.'s No. 11 Hendricks-B, SW NW SE Sec. 34, Blk. B-5 — Derrick.
Pure Oil Co.'s No. 12 Hendricks-B, NW SW SE Sec. 34, Blk. B-5 — Rigging up rig.
Pure Oil Co.'s No. 1 Grisham-Hunter-C — Drlg. 2,032 ft.
Pure Oil Co.'s No. 6 Grisham-Hunter, NW SW Sec. 41, Blk. B-5 — Drlg. 365 ft.
Republic Prod. Co.'s No. 1-A Grisham-Hunter-B, SW cor. E half SE Sec. 41, Blk. B-5 — Top salt 1,240 ft.; top lime 2,135 ft.; standardizing 2,390 ft.
Republic Prod. Co.'s No. 3 Grisham-Hunter-B, NE cor. SE Sec. 41, Blk. B-5 — Top lime 2,197 ft.; top salt 1,280 ft.; total depth 2,980 ft.; killing gas.
Republic Prod. Co.'s No. 4 Grisham-Hunter-B, NW cor. E half SE Sec. 41, Blk. B-5 — Drlg. plug. 2,391 ft.
Republic Prod. Co.'s No. 2 Hendricks-A, NE E half SW Sec. 45, Blk. 26 — Top salt 1,240 ft.; top lime 2,135 ft.; fishing 2,302 ft.
Republic Prod. Co.'s No. 1 Hendricks-C, SW NE NE Sec. 42, Blk. B-5 — Building rig; shut down.
Roxana Pet. Corp.'s No. 3 Grisham-Hunter-B — Top lime 2,602 ft.; drlg. 2,888 ft. in lime.
Roxana Pet. Corp.'s No. 4 Hendricks-B, Sec. 29, Blk. B-5 — Location.
Roxana Pet. Corp.'s No. 6 Ida Hendricks-C, SW SE N half NW Sec. 29, Blk. B-5 — Top salt 1,302 ft.; drlg. 1,615 ft.
Roxana Pet. Corp.'s No. 7 Ida Hendricks-C, SE SW N half NW Sec. 29, Blk. B-5 — Top salt 1,326 ft.; drlg. 2,340 ft., anhydrite.
Roxana Pet. Corp.'s No. 8 Hendricks-C, Sec. 29, Blk. B-5 — Building rig.
Roxana Pet. Corp.'s No. 3 Grisham-Hunter-D — Top salt 1,170 ft.; top lime 2,280 ft.; casing 2,577 ft.
Roxana Pet. Corp.'s No. 4 Grisham-Hunter-D, NE cor. S half NE Sec. 41, Blk. B-5 — Top salt 1,230 ft.; drlg. 2,260 ft.
Roxana Pet. Corp.'s No. 5 Grisham-Hunter-D, SE SW NE Sec. 41, Blk. B-5 — Shut down 600 ft.
Roxana Pet. Corp.'s No. 6 Grisham-Hunter-D, SW SE NE Sec. 41, Blk. B-5 — Cellar.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-E — Shut down 600 ft.
Roxana Pet. Corp. and Liano Oil Co.'s No. 2 W. F. Scarborough, SW cor. NE Sec. 1, Blk. C-22, School Land — Drlg. 550 ft.; top salt 1,120 ft.; top lime 2,670 ft.; drlg. 3,066 ft. in shale.
Sheldon & Burden's No. 1 Ida Hendricks, SW cor. SE Sec. 28, Blk. B-5 (10-a. tract) — Top salt 1,260 ft.; top lime 2,609 ft.; top pay 2,719 ft.; total depth 3,243 ft.; trying to run liner with packer.
Skelly Oil Co.'s No. 1 Hendricks, NW cor. W half NE Sec. 40, Blk. 26 — Drlg. 150 ft.
Southern C. O. P. Co.'s No. 2 T-89 Grisham-Hunter-A, Sec. 35, Blk. B-5 — Top salt 1,189 ft.; drlg. 2,301 ft.
Southern C. O. P. Co.'s No. 3 T-89-A Grisham-Hunter-A — Top salt 1,072 ft.; top lime 2,352 ft.; drlg. 2,352 ft.
Southern C. O. P. Co.'s No. 4 T-89-A Grisham-Hunter-A — Location.
Southern C. O. P. Co.'s No. 1 Ida Hendricks, 3-T-67-A, C SW NW NE Sec. 4, Blk. B-12, elev. 2,784 ft. — Top lime 2,638 ft.
Southern C. O. P. Co.'s No. 2 T-67-A, NE SE Sec. 42, Blk. B-5 — Top salt 1,835 ft.; drlg. 2,125 ft., anhydrite.
Southern C. O. P. Co.'s No. 2 Ida Hendricks 3-T-67-A — Total depth 2,805 ft.; straightening hole; 2,853 ft.
Southern C. O. P. Co.'s No. 1 Ida Hendricks, T-67-E, SE NE Sec. 42, Blk. B-5 — Drlg. 1,926 ft.
Southern C. O. P. Co.'s No. 2 T-67 Ida Hendricks-F — Top salt 1,715 ft.; cem. 6-in. 2,207 ft.; shut down 2,250 ft.
Southern C. O. P. Co.'s No. 3 T-67 Ida Hendricks-F — Top salt 1,702 ft.; top lime 2,688 ft.; top pay 2,990 ft.; agitating 3,030 ft.
Southern C. O. P. Co.'s No. 4 T-67 Ida Hendricks-F — Top salt 1,800 ft.; top lime 2,700 ft.; drlg.; total depth 2,985 ft.
Southern C. O. P. Co.'s No. 5 T-67 Ida Hendricks-C — Cem. 6-in. 2,643 ft.; drlg. 2,905 ft.; flowed 661 bbls. first 8 hrs.
Southern C. O. P. Co.'s No. 2 T-67 Hendricks-B — Top salt 1,866 ft.; setting 6-in. 2,658 ft.
Southern C. O. P. Co.'s No. 1 T-67 Hendricks-3-B — Top lime 2,505 ft.; drlg. 2,526 ft.
Southern C. O. P. Co.'s No. 2 T. G. Hendricks, T-67-3B, NE SW SW Sec. 33, Blk. 26 — Top lime 2,436 ft.; drlg. 2,437 ft.
Southern C. O. P. Co.'s No. 3 Hendricks 3-T-68-A — First gas 2,400 ft.; 8,000,000 ft. gas 2,420 ft.; total depth 2,420 ft.; drlg. by tools.
Southern C. O. P. Co.'s No. 1 T-88 Ida Hendricks-C, NW cor. Sec. 28, Blk. B-5 — 6,000,000 ft. gas 2,665 ft.; top pay 2,883-96 ft.; 500 ft. oil; total depth 2,915 ft.; drlg. by tools.
Southern C. O. P. Co.'s No. 4 Ida Hendricks, T-88-C — Top salt 1,290 ft.; top lime 2,535 ft.; drlg. 3,030 ft.
Southern C. O. P. Co.'s No. 1 Ida Hendricks, T-88-G, SW SE Sec. 28, Blk. B-5 — Top lime 2,612 ft.; drlg. 2,613 ft.
Southern C. O. P. Co.'s No. 1 T-88 Hendricks-H — Top salt 1,290 ft.; top lime 2,693 ft.; top pay 2,960 ft.; total depth 3,023 ft.; shut in for treating.
Southern C. O. P. Co.'s No. 2 T-88 Hendricks-H — Top salt 1,232 ft.; shut down 2,730 ft.
Southern C. O. P. Co.'s No. 3 Ida Hendricks, T-88-H, SW NW SW Sec. 28, Blk. B-5 — Top salt 1,275 ft.; junked old hole; drlg. new hole 673 ft.
Southern C. O. P. Co.'s No. 2 T-88 Hendricks-A — Drlg. 2,713 ft.
Southern C. O. P. Co.'s No. 2 Ida Hendricks, T-88-I, SE NE E half NE Sec. 30, Blk. B-5 — Rig.
Southern C. O. P. Co.'s No. 3 Ida Hendricks, T-88-I, NE SE E half NE Sec. 30, Blk. B-5 — Rig.
Southern C. O. P. Co.'s No. 1 T. G. Hendricks, T-88-K, NE cor. Sec. 41, Blk. 26 — Drlg. 795 ft.
Southern C. O. P. Co.'s No. 1 E. G. Hutchings, T-90, NE cor. E half SE Sec. 47, Blk. 26, elev. 2,835 ft. — Top salt 935 ft.; top lime 2,340 ft.; casing 2,661 ft.
Texon O. & L. Co.'s No. 2 Grisham-Hunter-A — Top lime 2,250 ft.; shut in at 2,727 ft.; preparing to kill gas.
Texon O. & L. Co.'s No. 3 Grisham-Hunter-A, NW cor. W half SE Sec. 41, Blk. B-5 — Top salt 1,450 ft.; fishing bit 2,539 ft.
Texon O. & L. Co.'s No. 4 Grisham-Hunter-A, NE cor. W half SE Sec. 41, Blk. B-5 — Rig and shut down.
Turman & Maxwell's No. 4 Ida Hendricks — Top lime 2,555 ft.; top pay 2,755 ft.; top salt 1,250 ft.; total depth 3,033 ft.; 600 bbls. per day.
Turman & Maxwell's No. 5 Hendricks, SE cor. E half NE Sec. 29, Blk. B-5 — Top lime 2,560 ft.; drlg. 2,795 ft.
Turman & Maxwell's No. 6 Hendricks, NW cor E half NE Sec. 29, Blk. B-5 — Top salt 1,217 ft.; top lime 2,471 ft.; top pay 2,780 ft.; drlg. 2,830 ft.; flowing by heads.
Turman & Maxwell's No. 8 Hendricks — Top salt 1,260 ft.; top lime 2,350 ft.; top pay 2,680 ft.; drlg. 2,710 ft.; spraying oil.
White Eagle O. & R. Co.'s (was Gibson & Johnson's) No. 1 P. A. Lock, 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well, elev. 2,830 ft. — Drlg. 3,180 ft. in sidetracked hole.

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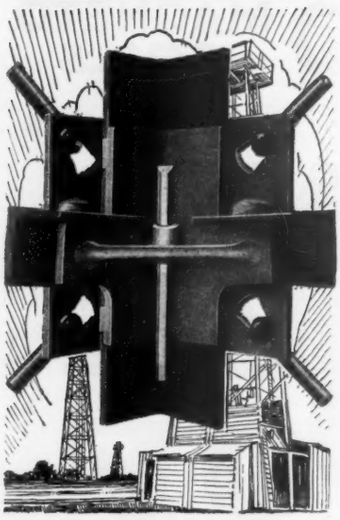

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PRORATION PLAN FOR THE HENDRICKS FIELD

(Continued from Page 29)

mitted that the foreign crude can be laid down on the Atlantic seaboard at a lower price than West Texas crude can reach the same market. Venezuela crude, it is reported, can be delivered on the Atlantic seaboard around $1.07 to $1.10 per barrel. West Texas crude sells for 60 cents per barrel at the well. The fields are approximately 400 miles distant from the Gulf Coast via pipe lines.

Price Situation

Pointing out that considerable crude is being moved from West Texas at prices considerably lower than the Humble company's posted price, Mr. Farish stated what many producers felt has been in the offing for sometime: "We have evidence that offers are being made currently at prices that mean as low as 30 and 35 cents at the well in West Texas fields, as compared with our price of 60 cents. We want you people to realize that we feel keenly this responsibility, but that we cannot do the impossible. We cannot indefinitely maintain a higher price than our competitors pay for crude." Mr. Farish's address is printed on another page of this issue.

Chairman Clarence E. Gilmore of the Railroad Commission presided at the meeting and C. V. Terrell and Lon A. Smith, members, made it clear to the meeting that the commission, if it accepted the responsibility of the Winkler situation, would be confronted with the handicap of lack of funds to pay either the salary or expenses of an umpire. It was suggested the chief supervisor be selected as an umpire in the event a proration arrangement was agreed to. This point, however, will be threshed out when the Railroad Commission appoints a committee to consider the proration agreement.

General Application

Suggestions were made of the desirability of applying the Winkler County remedy to overflush fields of the future or to the Yates Pool if voluntary restriction should break down. The idea of statutory provision legalizing State-wide restriction was attacked by W. H. Francis of Dallas, general attorney of the Magnolia Petroleum Co., who declared that regardless of how it might be disguised as conservation it was intended to secure $3 a barrel for oil instead of the present low price and that in spite of the interest of the University of Texas permanent fund and the school fund in oil royalty having put the State in the oil business, no Legislature would pass the law and if it did the people would repudiate it at the polls.

Judge R. L. Batts of Austin, counsel for the Gulf Co. and a member of the board of regents of the university, said there is no effective antitrust law on the statute books of Texas and that the narrow margin between physical resources and economic resources justified the belief that the wide latitude given the Railroad Commission by the Legislature included treating them as one and the same thing.

Mr. Hamilton's address went into detail in taking up oil production in Texas, giving figures both as to the actual production in the various fields and the estimated potential output. The latter figure provoked a challenge from a small group headed by C. D. Neff of Dallas and W. H. Holmes of Amarillo, which declared there is no actual excess in domestic production over domestic consumption.

West Texas Resolution

When Mr. Hamilton reached the resolution sponsored by the West Texas Chamber, Mr. Holmes challenged his right to speak for that body, citing an alleged "gentleman's agreement" by which both he and Hamilton would appear before the commission as individuals. Denying such an agreement, Mr. Hamilton explained that while he and Mr. Holmes differed on the contents of his statement, the West Texas Chamber directors were united on the resolution offered as to Winkler County, to which Holmes agreed.

Mr. Holmes repeated his declaration that neither he nor Hamilton was authorized to speak for the West Texas Chamber, and then offered figures as to domestic production and consumption, alleging that the former barely exceeds the latter, and that the country is fortunate it does, postponing a period of national crisis when it does not.

Judge Batts' Opinion

Declaring that his principal interest is that of conservation of Texas' one-time crop, and that while he has studied the situation as a member of the board of regents of the university, he appeared, as for many years under a retainer from the Gulf company, Judge Batts declared that while every one concerned in the oil industry wanted proper conservation they have been restrained by fear of the anti-trust laws of the State. In his opinion as a lawyer, he reiterated Texas has no anti-trust law. The Texas statute, Batts said, declares that it "shall not apply to live stock and other products in the hands of the original producers."

In the case of the Illinois statute, embodying practically the same language, Judge Batts said the Supreme Court had held that this verbage invalidates the clause on monopolies. The language is embodied in the Texas statute of 1911 and retained in the codification of 1925. The revised statutes of 1925 and the penal code of 1925 were provided for by two separate bills. It is declared in the final title of the latter to be the intent of the Legislature to put in everything the old act had put in and leave out everything it had left out. As far as the penal code is concerned, Judge Batts declared the antitrust law would seem to have no effect.

The Railroad Commission, Judge Batts said, has been given powers of conservation as broad as it is in the power of the Legislature to bestow. There is no question that it has been delegated to conserve the resources of the State. When it comes to whether by resources is meant the physical or the economic, he declared there might be a question, but there is so little difference between physical and economic resources that if an effort is made to differentiate a tremendous amount of trouble is created.

Speaking of conservation under direction of the commission, Judge Batts declared his only objection to the Winkler County solution lay in the fact that if he were proposing, it would be to go further and adopt the more direct methods of restriction already in effect in California and Oklahoma. Those States, Judge Batts said, have adopted measures which hold up the price of oil in Texas and the efficacy of which will be destroyed if Texas refuses its plain duty of co-operation and floods the market.

Vote on Proposals

At the afternoon session, J. P. Miller, Dallas attorney, offered a resolution that a committee of seven, representing the varied oil interests, under the chairmanship of the chief supervisor of the Railroad Commission, be appointed to go over the entire petroleum problem in Texas and refer back to the commission. Scott Heywood of Borger offered an amendment to have the committee include three independent operators and three big company representatives.

Mr. Hamilton and Underwood Nazro, Gulf Production Co., Houston, urged the necessity of action to meet the critical situation in the Winkler Field. Judge Francis spoke at length, attacking an idea of general restriction, and W. H. Strump of Laredo insisted that no law providing restriction could impair the constitutional right of a Texas property owner to market the oil and gas below the surface of his property. Eventually the Heywood amendment was defeated, 25 to 22.

Speaking against the original resolution, W. S. Farish again took the floor and opposed the suggestion on the ground that it was predicated on a belief that a temporary period of overproduction exists where it is his opinion and that of the Humble company that the oil industry is tied to a permanent period of excess supply and a permanent one of low prices.

Mr. Hamilton then offered the West Texas Chamber's solution for the Winkler Field as a substitute for the Miller resolution and after debate this carried, 22 to 20. Offered as the resolution, the substitute carried unanimously.

Attendance at Meeting

Those attending the conference were: James Anderson, Humble Oil & Refining Co.; H. J. Adair, oil and gas bureau West Texas Chamber of Commerce; W. S. Adkins, bureau of economic geology, University of Texas; E. G. Allen, Roxana Petroleum Corp.; T. J. Arnold, American Petroleum Co.; J. C. Adams, Transcontinental Oil Co.; W. S. Bangs, J. K. Hughes Development Co.; Ben C. Belt, Gulf Production Co.; L. E. Barrows, The Texas Company; J. S. Bridwell, Bridwell Oil Co.; J. J. Biffle, Attorney General's Department; R. L. Batts, University of Texas (Gulf Co.); Arno Behnke, Amerada Petroleum Corp.; Earl Callaway, Dixon Creek Oil Co.; Usher Carson, Petroleum Association, Laredo; T. L. Coplin, oil and gas division; S. P. Cusack, Skelly Oil Co.; Warner Clarke, California Co.; J. F. Champion, Prairie Oil & Gas Co.; F. K. Campbell, Dallas; C. C. Campen, Campen Co.; Frank Cullinan, Republic Producing Co.; R. F. Duggan, Duggan & Ingoe, Dallas; Floyd C. Dodson, El Capitan Oil Co.; W. S. Farish, Humble Oil Co.; T. L. Foster, Sun Oil Co.; Robert H. Feltner, Southern Crude Oil Purchasing Co.; Brann Fuller, Attorney General's Department; James R. Gahan, Tidal Oil Co.; R. V. Harnahan, Humble Pipe Line Co.; C. H. Huddleston, Denver Drilling Co.; W. B. Hamilton, West Texas Chamber of Commerce; Alvin C. Hope, Milham Corp., San Antonio; Harve H. Haines, Amarillo; John Hancock, Texas-Pacific Coal & Oil Co.; I. G. Harmon, Marland Oil Co.; W. Scott Heywood, Borger; W. H. Holmes, Amarillo; W. A. Jones, Minerva; W. L. Kingsland, Isom; J. P. Laney, Mid-Continent Oil & Gas Co.; E. A. Landreth, Landreth Production Co.; S. D. McIlroy, Dixon Creek Oil Co.; H. D. McCracken, United Producers Pipe Line Co.; Leslie McKay, oil and gas division, Railroad Commission; W. A. Moncrief, Marland Production Co.; J. A. Morehouse, oil and gas division, Railroad Commission; Otto Massey, United Producers' Pipe Line Co.; J. P. Miller, Dallas; George D. Morgan, Dixie Oil Co.; G. R. Marland, Marland Oil Co.; C. D. Neff, Dallas; C. B. Neil, Laredo Petroleum Club, Laredo; Underwood Nazro, Gulf Production Co.; J. H. Nie, Webb Oil Co.; Earl Oliver; John F. O'Donohoe, Petroleum Producers and Mid-Continent Oil & Gas Co.; Ralph R. Ogden, Austin; F. H. Pierson, oil and gas division, Railroad Commission; Wallace E. Pratt, Humble Oil & Refining Co.; D. C. Proctor, Gulf Co.; Frank T. Pickrell, Texon Oil & Land Co.; S. F. Russell, Osage Oil Corp.; Rupert P. Ricker, Ricker & Dodson, San Angelo; Goodson H. Rieger, oil and gas division, Railroad Commission; Felix A. Raymer, Corpus Christi; W. H. Ritterbusch, Phillips Petroleum Co.; R. M. Strum, Laredo Petroleum Club, Laredo; M. R. Stahl, Roxana Petroleum Corp.; Beeman Strong, Yount-Lee Oil Co.; J. P. Shannon, Snowden & McSweeney; M. B. Sweeney, Sun Oil Co.; John R. Suman, Humble Oil & Refining Co.; Geo. W. Stocking, Austin; J. S. Sidwell, Prairie Oil & Gas Co.; Laten Stanberry, Monroe, La.; Elliott Sanford, Amarillo; J. M. Sanford, Amarillo; E. E. Townes, Humble Oil Co.; W. A. Turnstill, Fort Worth; L. E. Turman, Turman-Maxwell; George B. Terrell, Department of Agriculture, Austin; Robert B. Violette, Independent Oil & Gas Co.; William A. Vinson, Prairie Oil & Gas Co.; T. W. Wheatley, Laredo Petroleum Club, Laredo; Charles E. Wolcott, Laredo District Petroleum Club, Laredo; R. M. Wallace, Dixie Oil Co.; J. C. Wallace, Minerva; T. J. Winter, Rycade Oil Corp.; A. W. Walker, Jr., law school, University of Texas; John L. Young, Atlantic Oil Producing Co.; W. A. Jones, Minerva, and T. E. Durham, clearing house, Amarillo.

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AUTOMATIC GATE VALVE TO PREVENT FIRE DEMONSTRATED TO FIELD MEN

SHREVEPORT, La., Mar. 10. — The first field demonstration of an automatic gate valve for oil and gas wells designed primarily for preventing fire, was made in the Richland Parish gas field and was a complete success. The valve is the product of the Kerotest Manufacturing Co. of Pittsburgh and employs the principle of the automatic sprinkler system which has become standard installation for fire prevention in various types of buildings. It was tried out in Moody-Seagraves' No. 1 La Fleur in Section 18-16-6, a 55,000,000-foot gasser. Two tests were made, one with the well blowing wide open and the other wide open and burning. Rock pressure on the well is in the neighborhood of 1,200 pounds and the valve functioned perfectly in both cases, cutting off the gas in an instant. The test was witnessed by a large gallery of production superintendents, field foremen, drilling foremen and others from the companies operating in this territory.

The appliance consists of a Kerotest extra heavy cast steel drilling valve with full-sway opening through valve and receding seats. On this valve is a specially designed bonnet or cover supporting a high pressure cast steel operating cylinder having a special bronze piston attached to the valve stem. On this operating cylinder is mounted a manifold and check valve to which manifold may be attached as many leads of high pressure flexible copper tubing as desired. These tubes are all fitted with fusible metal connections or links which may be inserted wherever desired, and from these links the tubes lead to a high pressure air storage tank located as such distance from the well as desired.

The air pressure is constantly exerted against these fusible links and whenever fire or heat of 212 degrees Fahrenheit comes in contact with them the fusible metal becomes plastic and is driven forward by the air pressure and the air is by-passed through the tubing to the manifold on the valve and thence through the check valve into the operating cylinder, forcing the piston downward and by this action driving the wedge gate to a perfect seat and closing off all flow of oil or gas. A special hand wheel is provided for opening the valve only and is removed when the valve is in service.

The valve is made in all sizes of pipe, casing and tubing with either flanged or screwed ends and the entire system is flexible to provide use of as many air tanks as desired at whatever distance from the well or wells the operator may see fit and for installation of as many of the fusible links as he may see fit and wherever he wants them about the derrick of a drilling well or christmas tree of a completed well, whether the derrick has been removed or left standing. It is distributed by Norvell-Wilder Hardware Co. Oil Well Supply Co. and Grinnell Co.

Installation of the system was supervised and the test made by R. W. Mueller, production manager for the Kerotest company, and Harry C. Potts and Shep Miers, of Shreveport, sales representatives.

Leaders in the field test. Left to right: R. W. Mueller, production manager; Harry C. Potts, sales representative, and Shep Miers, sales representative, of the Kerotest Manufacturing Corp.

H. L. DILLON SERIOUSLY ILL

H. L. Dillon, connected with the Oil Well Supply Co., is seriously ill in a sanitarium at Houston, Tex., and members of his family are very anxious to get in touch with Carroll Dillon, Okey Dillon and John Dillon, brothers of H. L. These brothers, when last heard from, were oil field workers in Oklahoma.

HUMBOLDT COUNTY SURVEY

The possibility of commercial production of oil and gas in southwestern Humboldt County, California, is remote, in spite of "encouraging results" obtained by some wells, the Geological Survey of the Department of the Interior has just announced in a statement based on exploration made by H. W. Roots, geologist of the survey.

ABRAHAM HARRIS DEAD

Abraham Harris, father of Nat E. Harris of Bradford, Pa., oil producer, and grandfather of Howard Harris, with the Standard Oil Co. in the Rumanian Field, died recently in Buffalo, N. Y., age 93 years.

INJURED IN EXPLOSION

BOWIE, Tex., Mar. 10.—Three men were seriously injured and several others escaped with minor hurts when a box of dynamite caps was exploded on the Sinclair pipe line 5 miles south of Bowie. Frank Jones of Newport, Tex., powder man, lost the sight of both eyes and his hearing. John Hoskins of Tulsa, Okla., welder, lost the sight of one eye. Both men were severely cut and bruised on the arms and chest. A. J. Dupree of Nacogdoches, Tex., suffered a ruptured eardrum.

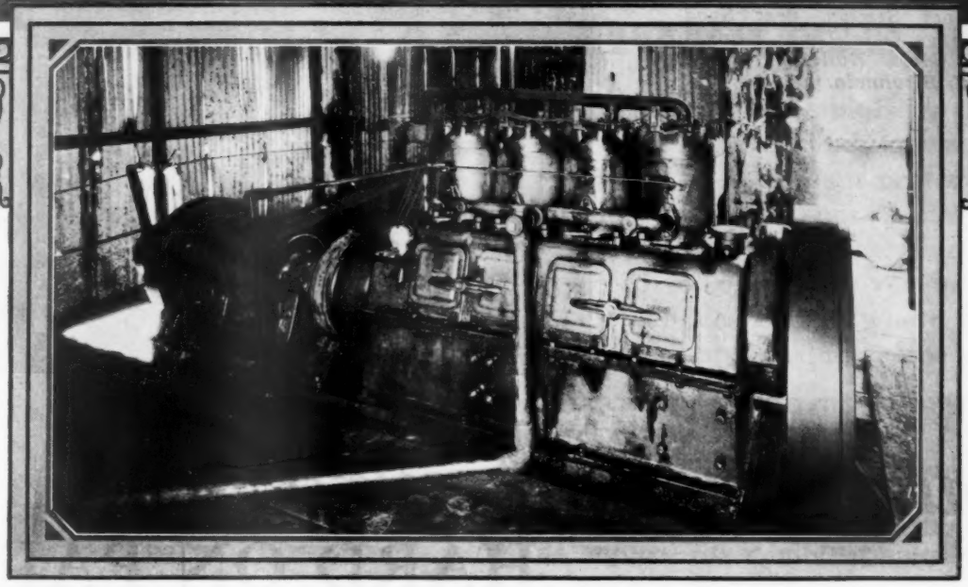
NO DUTY ON SPANISH MONOPOLY

According to the 20-year contract of the concessionary company of the Spanish petroleum monopoly no customs duties of any class are to be required for the importation into Spain of the products pertaining to the petroleum monopoly.

DEATH OF W. P. WATSON

Walter P. Watson, veteran oil producer in the Bradford Field, died at his home in Derrick City, Pa., March 6, after an illness of five years.

CLARK DRILLING ENGINE



6 Good Reasons Why the CLARK is Gaining in Popularity

DOES EVERYTHING ANY ENGINE CAN DO. The CLARK Drilling engine gives the needed slow drilling motion. Furnishes plenty of power for the largest and deepest wells. Handles heaviest strings of pipe. Controlled from derrick floor.

SAVES MONEY ON FUEL. Uses, on average, only about 7,000 feet of gas, or 75 gallons of gasoline, per day—a definite economy in fuel.

SAVES WATER EXPENSE. Uses practically no water, eliminating trouble and expense of providing large amount of water, and of cleaning scale.

DRILLS FASTER because it maintains maximum power and speed indefinitely, with no waiting for pressure.

MORE PORTABLE. Weighs but 13,000 pounds, and is readily moved on its own truck.

REDUCES FIRE RISK by eliminating open fires which might ignite escaping gas or oil.

CLARK BROS. COMPANY
Olean, N. Y.
Branch and Warehouse: 125 W. First St., Tulsa
Warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M.
SMITH BOOTH USHER COMPANY
228 S. Central Ave., Los Angeles 50 Fremont St., San Francisco

CLARK

Charles Page Interests—Bruner Station, near Sand Springs, Okla. Tanks, Bridges and Metal Buildings coated with Bitulumin.

"Southern Exposure" HARD ON PAINTS

Sun's ultra violet rays cause rapid surface breakdown

Aluminum paints largely immune

Correctly made aluminum paints like Bitulumin are largely immune to destructive ultra violet rays. They will outlast the best oil and zinc paints by two to one.

Bitulumin forms a protective coating of tiny aluminum flakes like shingles held firmly together by its moisture proof liquid vehicle. It is both light proof and weather proof.

Because Bitulumin deflects approximately 86% of sun rays it makes for cooler surfaces and in the case of tanks reduces evaporation.

Bitulumin altho widely used for painting oil storage is equally efficient on tank cars, metal buildings, refinery equipment, still towers, water tanks, bridges, etc.

Bitulumin, put up in double containers to insure fresh mixing, is manufactured by Hill, Hubbell & Company, manufacturers of a special line of paints and protective coatings for the oil industry.

HILL, HUBBELL & COMPANY

Manufacturers of Highest Grade Oil Industry Paints and Pipe Line Coatings

Factories at SAN FRANCISCO and TULSA

District Offices

LOS ANGELES
SEATTLE
HOUSTON
PORTLAND
NEW YORK CITY
BALTIMORE

BUREAU OF MINES STATISTICS FOR JANUARY, 1928

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke, and asphalt in thousands of barrels of 42 U. S. gallons)

	January 1928	December 1927	November 1927
NEW SUPPLY:			
Domestic production:			
Crude petroleum:			
Light	64,266	65,784	61,324
Heavy	8,055	8,324	10,151
Total crude	72,321	74,108	71,475
Natural-gas gasoline	3,426	3,512	3,145
Benzol	226	212	217
Total	75,973	77,832	74,837
Daily average	2,451	2,511	2,414
Excess of daily average domestic production over domestic demand	574	199	425
Imports:			
Crude	6,145	6,209	4,514
Refined	1,165	755	1,189
Total new supply all oils	83,283	84,796	80,540
Daily average	2,687	2,735	2,598
Change in stocks all oils	12,118	1,535	7,607
DEMAND:			
Total demand	71,165	83,261	72,933
Daily average	2,296	2,686	2,353
Exports:*			
Crude	1,232	1,717	1,204
Refined	11,738	9,863	10,062
Domestic demand	58,195	71,681	61,667
Daily average	1,877	2,312	1,989
STOCKS (end of month):			
Crude:			
East of California:†			
Light	309,482	303,639	230,872
Heavy	49,410	48,007	48,100
California:			
Light	20,493	20,058	31,017
Heavy‡	94,327	91,797	87,971
Total crude	473,712	463,501	397,960
Natural-gas gasoline at plants	740	734	560
Total refined	121,850	119,949	129,184
Grand total stocks all oils	596,302	584,184	527,704
Days' supply§	260	217	224
Bunker oil (included above in domestic demand)	3,783	4,264	3,940

*Includes shipments to noncontiguous territories. †Exclusive of producers' stocks. ‡Includes fuel oil. §Grand total stocks divided by daily average total demand.

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY

(Barrels of 42 U. S. gallons)

	January, 1928		December, 1927		January, 1927	
Field—	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Appalachian	2,398,000	77,400	2,441,000	78,700	2,319,000	74,800
Lima-Indiana	124,000	4,000	129,000	4,200	140,000	4,500
Michigan	31,000	1,000	33,000	1,100	29,000	900
Ill.-S. W. Ind.	580,000	18,700	595,000	19,200	642,000	20,700
Mid-Continent	44,143,000	1,423,900	45,500,000	1,467,800	40,808,000	1,316,400
Gulf Coast	3,626,000	117,000	4,007,000	129,200	4,766,000	153,800
Rocky Mountain	2,391,000	77,100	2,464,000	79,500	2,586,000	83,400
California	19,028,000	613,800	18,939,000	610,900	20,185,000	651,100
U. S. total	72,321,000	2,332,900	74,108,000	2,390,600	71,475,000	2,305,600
State—						
Arkansas	2,732,000	88,100	2,807,000	90,600	4,079,000	131,600
California	19,028,000	613,800	18,939,000	610,900	20,185,000	651,100
Colorado	219,000	7,100	217,000	7,000	233,000	7,500
Illinois	510,000	16,400	529,000	17,100	587,000	18,900
Indiana	77,000	2,500	74,000	2,400	64,000	2,100
Southwestern	70,000	2,300	66,000	2,100	55,000	1,800
Northwestern	7,000	200	8,000	300	9,000	300
Kansas	3,346,000	107,900	3,264,000	105,300	3,598,000	116,100
Kentucky	542,000	17,500	554,000	17,900	509,000	16,400
Louisiana	1,758,000	56,700	1,721,000	55,500	1,892,000	61,000
Gulf Coast	397,000	12,800	311,000	10,000	295,000	9,500
Rest of State	1,361,000	43,900	1,410,000	45,500	1,597,000	51,500
Michigan	31,000	1,000	33,000	1,100	29,000	900
Montana	370,000	11,900	344,000	11,100	413,000	13,300
New Mexico	79,000	2,500	80,000	2,600	132,000	4,300
New York	187,000	6,000	191,000	6,100	170,000	5,500
Ohio	560,000	18,100	564,000	18,200	579,000	18,700
Central and Eastern	443,000	14,300	443,000	14,300	448,000	14,500
Northwestern	117,000	3,800	121,000	3,900	131,000	4,200
Oklahoma	20,956,000	676,000	22,309,000	719,600	18,497,000	596,700
Osage County	1,815,000	58,500	1,807,000	58,300	2,229,000	71,900
Rest of State	19,141,000	617,500	20,502,000	661,300	16,268,000	524,800
Pennsylvania	762,000	24,600	782,000	25,200	721,000	23,200
Tennessee	2,000	100	4,000	100	5,000	200
Texas	18,977,000	612,200	19,406,000	626,000	17,508,000	564,800
Gulf Coast	3,229,000	104,200	3,696,000	119,200	4,471,000	144,300
Rest of State	15,748,000	508,000	15,710,000	506,800	13,037,000	420,500
West Virginia	462,000	14,900	467,000	15,100	466,000	15,000
Wyoming	1,723,000	55,600	1,823,000	58,800	1,808,000	58,300
Salt Creek	1,298,000	41,900	1,228,000	39,600	1,274,000	41,100
Rest of State	425,000	13,700	595,000	19,200	534,000	17,200
Classification by gravity (approx.)						
Light crude	64,266,000	2,073,100	65,784,000	2,122,100	61,324,000	1,978,200
Heavy crude	8,055,000	259,800	8,324,000	268,500	10,151,000	327,400

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (BARRELS)

(From Bureau of Foreign & Domestic Commerce)

	January, 1928		December, 1927		January, 1927	
	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Imports	6,145,000	198,200	6,209,000	200,300	4,514,000	145,600
From Mexico	1,210,000	39,000	1,327,000	42,800	2,040,000	65,800
From Venezuela	3,283,000	105,900	3,510,000	113,200	1,320,000	42,600
From Colombia	1,141,000	36,800	1,075,000	34,700	839,000	27,100
From other countries	511,000	16,500	297,000	9,600	315,000	10,100
Exports:*	1,226,000	39,500	1,717,000	55,400	1,204,000	38,800
Domestic crude oil:						
To Canada	865,000	27,900	1,412,000	45,600	968,000	31,200
To other countries	361,000	11,600	305,000	9,800	236,000	7,600
Foreign crude oil						

*Shipments of crude to Hawaii during January, 6,000 bbls.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

(Barrels)

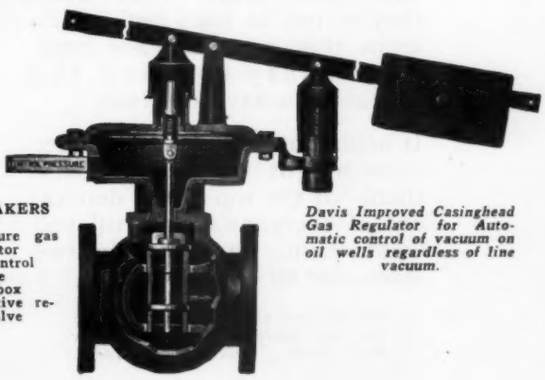
	Jan., 1928	Dec., 1927	Jan., 1927
Crude oil	234,000	886,000	389,000
Refined products	1,471,000	1,549,000	2,321,000
Gasoline	1,072,000	934,000	749,000
Asphalt	1,000	1,000	
Gas oil	311,000	542,000	499,000
Fuel oil	2,000	72,000	1,072,000
Lubricants	85,000	1,000	1,000

Just one internal movable part!

THE absolute simplicity of Davis design—there is only one internal movable part—is its own protection against failure in this Davis Casing Head Gas Regulator. It is an automatic valve designed to control the vacuum on oil and gas wells, especially where a number of wells are operated from one vacuum line.

Operation is extremely simple—the counterweight holds the valve open, and the vacuum closes it. No complicated mechanism to get out of order. Only the balanced, bevel seated disc which is securely coupled to a flexible diaphragm—the one internal movable part.

Thousands of Davis Casing Head Gas Regulators are in use. Practically every natural gasoline manufacturer throughout the country has them. And there are many other Davis specialties bringing savings and protection in the oil and gas industry. Send for new catalog giving a complete description and details of their construction and design.



ALSO MAKERS OF
Low pressure gas regulator
Fluid control valve
Float box
Supersensitive relief valve

Davis Improved Casinghead Gas Regulator for Automatic control of vacuum on oil wells regardless of line vacuum.

G. M. DAVIS REGULATOR CO.
409 Milwaukee Avenue
Chicago, Ilinois

WESTCOTT & GREIS, Inc.
Sales Engineers
TULSA LOS ANGELES DALLAS

Valve makers for over fifty years

DAVIS VALVE SPECIALTIES

O&GJ3-15-Gray

Sucker Rods Cost Money!

Save them from the Junk Pile *with* The Lorraine Sucker Rod Rack

It's a pretty safe bet that just as many sucker rods have gone to the junk pile through careless handling when not in use as from actual operating accidents.

We don't know what you do with your sucker rods when they're not in use; but we do know that you can save hard, cash money by using the Lorraine Sucker Rod Rack.

It holds the rods in perfect order —no weight to bend or twist them—at the top of the derrick, out of everyone's way, till you want them. It comes in two sizes—for 60 or 88 stands.

We suggest that you write us and find out more about our Sucker Rod Rack. Folder on request.

THE LORRAINE CORP.

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OIL WELL SPECIALTIES
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Los Angeles, Calif.

Oklahoma Branch:
The Lorraine Corporation,
Percy D. Hammer, Agent
406 West First Street,
TULSA, OKLA.

Arkansas Branch:
Southern Specialty Co.,
523 S. Washington St.,
Box 1796
EL DORADO, ARKANSAS

Kern County Representatives:
New Method Pipe Slotting Company
Phone 465 Taft

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES

AT REFINERIES (and in coastwise transit thereto.) Reported by location of storage:		Jan. 31, 1928	Dec. 31, 1927	Jan. 31, 1927
East Coast:				
Domestic		8,569,000	8,690,000	7,315,000
Foreign		3,491,000	2,686,000	2,164,000
Appalachian		1,882,000	1,871,000	1,597,000
Indiana, Illinois, etc.		2,812,000	2,777,000	2,294,000
Oklahoma, Kansas, etc.		5,655,000	4,871,000	3,135,000
Texas:				
Inland		1,484,000	1,432,000	1,094,000
Gulf Coast:				
Domestic		8,006,000	7,686,000	8,133,000
Foreign		153,000	219,000	152,000
Arkansas and Inland Louisiana		441,000	408,000	552,000
Louisiana Gulf Coast:				
Domestic		5,886,000	6,149,000	6,787,000
Foreign		1,289,000	1,046,000	722,000
Rocky Mountain		1,498,000	1,400,000	1,609,000
Total east of California		41,167,000	39,235,000	35,544,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio	Gross	6,459,000	6,613,000	6,603,000
	Net	6,148,000	6,285,000	6,319,000
Kentucky:	Gross	1,176,000	1,168,000	1,243,000
	Net	1,048,000	1,041,000	1,116,000
Lima-Indiana:	Gross	1,282,000	1,287,000	879,000
	Net	1,128,000	1,134,000	667,000
Illinois-S. W. Indiana:	Gross	12,616,000	12,664,000	12,372,000
	Net	12,122,000	12,170,000	11,887,000
Mid-Continent:				
Oklahoma, Kansas, Central, North and West Texas:	Gross	238,149,000	233,997,000	159,760,000
	Net	225,885,000	221,558,000	147,209,000
Northern Louisiana and Arkansas:	Gross	28,435,000	28,174,000	32,725,000
	Net	25,817,000	25,373,000	30,089,000
Gulf Coast:	Gross	18,550,000	17,969,000	18,481,000
	Net	18,161,000	17,526,000	18,156,000
Rocky Mountain:	Gross	27,331,000	27,279,000	27,526,000
	Net	27,288,000	27,235,000	27,474,000
Total pipe line and tank farm stocks east of California	Gross	333,998,000	329,151,000	259,589,000
	Gross	317,597,000	312,322,000	242,917,000
Foreign crude petroleum on Atlantic Coast		85,000	52,000	84,000
Foreign crude petroleum on Gulf Coast		43,000	37,000	427,000
		128,000	89,000	511,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of Calif.		358,892,000	351,646,000	278,972,000
CLASSIFICATION BY GRAVITY (approx.):				
East of California:				
Light crude (24 degrees and above)		309,482,000	303,639,000	230,013,000
Heavy crude (below 24 degrees)		49,410,000	48,007,000	48,959,000
California:				
Light		20,493,000	20,058,000	31,017,000
Heavy (including fuel)		94,327,000	91,797,000	87,971,000

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (BARRELS)

	January, 1928		December, 1927		January, 1927	
	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Domestic petroleum by fields of origin:						
Appalachian	2,528,000	81,500	2,706,000	87,300	2,674,000	86,300
Lima-Indiana	130,000	4,200	104,000	3,400	139,000	4,500
Michigan	31,000	1,000	33,000	1,100	29,000	900
Ill. & S. W. Ind.	628,000	20,300	614,000	19,800	525,000	16,900
Mid-Continent	39,372,000	1,270,100	42,524,000	1,371,700	37,358,000	1,205,100
Gulf Coast	2,991,000	96,500	4,100,000	132,200	6,641,000	214,200
Rocky Mountain	2,338,000	75,400	2,485,000	80,200	3,187,000	102,800
Deliveries and exports	48,018,000	1,549,000	52,566,000	1,695,700	50,553,000	1,630,700
Deliveries	47,272,000	1,524,900	51,447,000	1,659,600	49,695,000	1,603,000
Foreign petroleum	6,106,000	197,000	6,459,000	208,400	4,612,000	148,800
Deliveries of domestic and foreign petroleum	53,378,000	1,721,900	57,906,000	1,868,000	54,307,000	1,751,800

NUMBER OF PRODUCING OIL WELLS COMPLETED*

January, 1928	December, 1927	January, 1927
764	905	1,385

*For States east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, JANUARY, 1928

	Crude Oil—Domestic	Crude Oil—Foreign	Unfinished oils	Natural-gas gasoline blended	Total Input (bbls.)
East Coast	8,948,000	3,719,000	1,044,000	241,000	13,952,000
Appalachian	2,445,000	.....	114,000	64,000	2,623,000
Indiana, Illinois, etc.	7,077,000	.....	424,000	159,000	7,660,000
Oklahoma, Kansas, etc.	8,294,000	.....	334,000	320,000	8,948,000
Texas	14,043,000	53,000	391,000	474,000	14,961,000
Louisiana and Arkansas	5,219,000	321,000	249,000	475,000	6,264,000
Rocky Mountain	1,978,000	.....	602,000	84,000	2,664,000
California	16,096,000	.....	*456,000	†1,123,000	17,675,000
United States total	64,100,000	4,093,000	3,614,000	2,940,000	74,747,000
Daily average, 1/28	2,067,800	132,000	116,600	94,800	2,411,200
Daily average, 12/27	2,109,300	159,100	101,300	97,900	2,467,600
Texas Gulf Coast	10,982,000	53,000	354,000	390,000	11,779,000
Louisiana Gulf Coast	3,744,000	321,000	96,000	390,000	4,551,000

	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)	Wax (lbs.)
East Coast	4,152,000	853,000	6,921,000	873,000	19,578,000
Appalachian	1,106,000	280,000	611,000	370,000	7,928,000
Indiana, Illinois, etc.	3,859,000	492,000	2,229,000	309,000	6,556,000
Oklahoma, Kansas, etc.	4,387,000	846,000	2,826,000	187,000	3,766,000
Texas	5,925,000	1,257,000	5,895,000	614,000	6,170,000
Louisiana and Arkansas	2,030,000	504,000	2,527,000	54,000	7,305,000
Rocky Mountain	1,208,000	158,000	642,000	49,000	4,015,000
California	5,212,000	656,000	10,620,000	202,000	.....
United States total	27,879,000	5,047,000	32,271,000	2,658,000	55,320,000
Daily average, 1/28	899,000	162,800	1,041,000	85,700	1,784,500
Daily average, 12/27	919,700	157,100	1,065,500	90,400	1,743,200
Texas Gulf Coast	4,730,000	1,037,000	4,443,000	584,000	5,852,000
Louisiana Gulf Coast	1,613,000	441,000	1,491,000	51,000	7,305,000

	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished products (bbls.)	Losses (bbls.)
East Coast	10,900	77,200	90,000	64,000	438,000
Appalachian	2,800	200	23,000	45,000	144,000
Indiana, Illinois, etc.	26,800	36,700	170,000	57,000	158,000
Oklahoma, Kansas, etc.	20,600	500	41,000	112,000	420,000
Texas	23,100	15,200	6,000	517,000	539,000
Louisiana and Arkansas	11,700	28,000	136,000	675,000	102,000
Rocky Mountain	7,100	900	13,000	504,000	24,000
California	.....	40,200	134,000	*323,000	302,000
United States total	103,000	198,900	613,000	2,297,000	2,128,000
Daily average, 1/28	3,320	6,420	19,770	74,100	68,650
Daily average, 12/28	3,480	8,470	19,100	78,500	66,500
Texas Gulf Coast	19,800	15,200	2,000	348,000	443,000
Louisiana Gulf Coast	11,500	26,700	122,000	556,000	50,000

*Includes 138,000 bbls. net tops rerun. Wax, coke and asphalt equivalent to 279.4 pounds per barrel and 5.25 and 5.61 bbls. per ton, respectively. †Includes 212,000 bbls. natural-gas gasoline run through pipe lines.

Elliott Cores *always* cost less per foot

—and they're better, more informative at that!

When you watch your Elliott Core Drill disappear in the hole you know that the next time you see it, it will present you with indisputable evidence of formations below. The core comes up just as the formations stand—without mixing, and in good condition.

The Elliott Two-Piece Core Drill is made with the precision of a scientific instrument—which it is—and yet it will stand all the tough treatment you can give it.

Be sure of your cores—and get them at lower cost per foot recovered. There's only one way—that's with the Elliott Two-Piece Core Drill.

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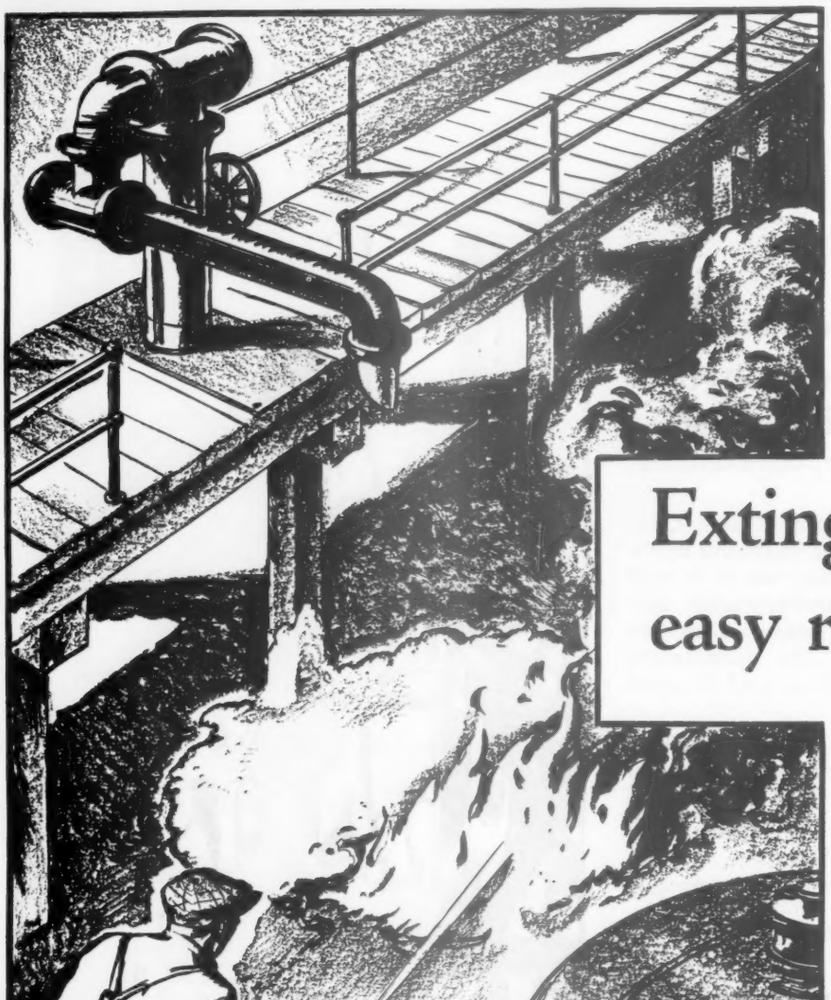

Foamite Extinguishers within easy reach

A quick attack with a FOAMITE Extinguisher kills the small fire before it spreads.

To be adequately protected to fight the small fire as soon as it occurs, you ought to have a FOAMITE Extinguisher or a FOAMITE Engine within easy reach.

Of course you have FOAMITE Equipment at your loading racks, look boxes, stills, and in the can filling department. But there are other places where small fires may break out—and these too should be protected.

The FOAMITE 2½ Gallon Extinguisher generates over twenty gallons of *Firefoam* and throws a stream from twenty to thirty feet. On the incipient fire it is just as effective as your FOAMITE System is on the larger fire.

Ask for a demonstration of this FOAMITE Extinguisher, and the FOAMITE 40-Gallon Engine. There are representatives at points convenient to all principal oil producing and refining centers. American-LaFrance & Foamite Corporation, Engineers and Manufacturers, Dept. F2, Elmira, N.Y.

AMERICAN-LAFRANCE & FOAMITE PROTECTION

A Complete Engineering Service for Extinguishing Fires

COMPARATIVE ANALYSES
(Thousands of barrels of 42 U. S. gallons)

	Production* Total	Dly. Av.	Imports† Total	Dly. Av.	Exports‡ Total	Dly. Av.	Stocks end of period	Domestic demand Total	Dly. Av.
Crude to Stills—									
January, 1928	68,193	2,200	6,145	198	1,232	40	‡379,385	.....	...
December, 1927	70,323	2,268	6,209	200	1,717	55	‡371,704	.....	...
November, 1927	69,587	2,320	5,339	178	1,280	43	‡370,076	.....	...
January, 1927	69,603	2,245	4,514	146	1,204	39	‡309,989	.....	...
Gasoline—									
January, 1928	27,879	899	562	18	3,713	120	36,112	20,939	675
December, 1927	28,512	920	282	9	3,164	102	32,323	23,718	765
November, 1927	28,558	952	417	14	3,724	124	30,401	24,400	813
January, 1927	27,960	902	526	17	3,557	115	46,058	17,888	577
Kerosene—									
January, 1928	5,047	163	46	1	2,350	76	7,670	2,742	88
December, 1927	4,869	157	15	...	1,237	40	7,669	3,819	123
November, 1927	4,824	161	27	1	1,821	61	7,841	2,514	84
January, 1927	5,113	165	....	...	1,616	52	8,190	3,882	125
Gas oil and Fuel oil—									
January, 1928	32,271	1,041	553	18	4,175	135	§123,950	.....	...
December, 1927	33,029	1,065	451	15	3,828	123	§123,779	.....	...
November, 1927	32,594	1,086	704	23	4,013	134	§126,192	.....	...
January, 1927	32,936	1,062	660	21	3,732	120	§111,166	.....	...
Lubricants—									
January, 1928	2,658	86	....	...	934	30	7,978	1,606	52
December, 1927	2,801	90	....	...	802	26	7,860	1,663	54
November, 1927	2,477	83	....	...	798	27	7,524	1,739	58
January, 1927	2,570	83	1	...	864	28	7,887	1,396	45
Wax (Thousands of pounds)—									
January, 1928	55,320	1,785	1,117	36	39,712	1,281	168,900	15,039	485
December, 1927	54,039	1,743	1,906	61	30,569	986	167,214	29,862	963
November, 1927	48,146	1,605	3,132	104	32,541	1,085	171,700	17,404	580
January, 1927	54,114	1,746	460	15	29,228	943	192,835	17,842	576

*Figures in this column for crude petroleum are runs to stills. †From Bureau of Foreign & Domestic Commerce, subject to revision. Exports, except for wax, include shipments to Alaska, Hawaii, and Porto Rico. ‡Includes California light. §Includes California heavy.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—JANUARY, 1928
(Barrels)

	Straight Run	%	Cracked	%	Natural-gas Gasoline	%	Total
East Coast	2,360,000	57	1,551,000	37	241,000	6	4,152,000
Appalachian	759,000	69	283,000	25	64,000	6	1,106,000
Indiana, Illinois, etc.	2,012,000	52	1,688,000	44	159,000	4	3,859,000
Oklahoma, Kansas, etc.	2,614,000	60	1,453,000	33	320,000	7	4,387,000
Texas	3,184,000	54	2,267,000	38	474,000	8	5,925,000
Louisiana and Arkansas	1,017,000	50	538,000	27	475,000	23	2,030,000
Rocky Mountain	626,000	52	498,000	41	84,000	7	1,208,000
California	3,471,000	67	618,000	12	1,123,000	21	5,212,000
Total	16,043,000	57	8,896,000	32	2,940,000	11	27,879,000
Total December, 1927	16,311,000	57	9,167,000	32	3,034,000	11	28,512,000
Gulf Coast	3,223,000	51	2,340,000	37	780,000	12	6,343,000

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES, JANUARY 31, 1928

	Gasoline (bbls.)	Kerosene (bbls.)	Gas and Fuel Oils (bbls.)	Lubricants (bbls.)
East Coast	5,613,000	1,463,000	10,563,000	2,705,000
Appalachian	1,234,000	307,000	1,033,000	1,087,000
Indiana, Illinois, etc.	4,619,000	930,000	1,214,000	908,000
Oklahoma, Kansas, etc.	3,507,000	699,000	4,517,000	528,000
Texas	5,174,000	1,213,000	7,672,000	1,681,000
Louisiana and Arkansas	1,905,000	1,066,000	3,939,000	126,000
Rocky Mountain	2,035,000	411,000	685,000	142,000
California	12,025,000	1,581,000	.....	801,000
Total	36,112,000	7,670,000	*29,623,000	7,978,000
Total December 31, 1927	32,323,000	7,669,000	*31,982,000	7,860,000
Texas Gulf Coast	4,399,000	1,132,000	6,103,000	1,616,000
Louisiana Gulf Coast	1,807,000	1,051,000	3,335,000	124,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other Finished Products (bbls.)	Unfinished Oils (bbls.)
East Coast	57,613,000	33,400	78,300	106,000	6,646,000
Appalachian	24,095,000	900	200	82,000	1,161,000
Indiana, Illinois, etc.	17,005,000	33,800	28,800	481,000	3,593,000
Oklahoma, Kansas, etc.	2,762,000	56,100	1,400	95,000	2,315,000
Texas	8,743,000	83,900	11,100	14,000	9,929,000
Louisiana and Arkansas	45,342,000	63,700	27,200	90,000	2,016,000
Rocky Mountain	13,292,000	58,800	9,500	12,000	1,432,000
California	48,000	.....	52,800	296,000	†8,585,000
Total	168,900,000	330,400	209,300	1,176,000	35,777,000
Total Dec. 31, 1927	167,214,000	345,100	220,800	1,221,000	35,314,000
Texas Gulf Coast	8,713,000	70,900	11,100	6,000	8,543,000
Louisiana Gulf Coast	45,342,000	61,500	26,900	80,000	1,638,000

*East of California. †Includes 1,502,000 bbls. tops in storage.

Natural-Gas Gasoline

The daily average production of natural-gas gasoline suffered another decline in January, 1928, when the total output was 143,900,000 gallons, or a daily average of 4,640,000 gallons. The major portion of this decrease in production occurred in the Seminole district of Oklahoma. Stocks of natural-gas gasoline at the plants on January 31, 1928, amounted to 31,077,000 gallons, which represents a slight increase over the previous month. Blending at the plants declined, but the use of natural-gas gasoline by refineries continued heavy, particularly in California.

(Thous. of gallons.)	Natural-Gas Gasoline Production* Jan., 1928	Dec., 1927	Jan., 1927	Stocks End of Month Jan., 1928	Dec., 1927	Blended Motor Fuel, January, 1928 Nat'l-Gas Gasoline Used	Nap'tha or Other Oils Used	Stocks End of Month
Appalachian	10,600	10,000	11,200	3,919	3,240	72	120	246
Ind., Ill., etc.	1,300	1,300	1,700	285	281	81	1	15
Okla., Kans., etc.	53,900	57,300	43,600	15,772	15,635	1,727	2,874	638
Texas	26,200	27,000	24,700	7,704	8,789	253	534	146
Louisiana and Ark.	6,700	6,800	6,900	1,644	1,162	195	175	47
Rocky Mountain	3,200	2,800	3,700	441	466	.....	.....	124
Total east of Calif.	101,900	105,200	91,800	29,765	29,573	2,328	3,714	1,216
California	42,000	42,300	40,300	1,312	1,274	Not available		.....
Total United States	143,900	147,500	132,100	31,077	30,847	.....	.....	1,216
Daily average	4,640	4,760	4,260	.....	.....	.....	.....	.....

*Approximately 97 per cent net production; 3 per cent gross.

The indicated output of motor fuel from the above and other sources may be expressed by the following table:

(Thousands of gallons.)

	January, 1928	December, 1927	January, 1927
Total gasoline produced at refineries * †	1,170,900	1,197,500	1,174,300
Raw gasoline blended at plants east of California	2,300	2,800	2,600
Raw gasoline sold direct to jobbers (estimated)	‡2,100	800	800
Benzol production§	9,500	8,900	9,100
Total motor fuel produced	1,184,800	1,210,000	1,186,800
Daily average	38,220	39,030	38,280
*Includes natural-gas gasoline blended at refineries	114,600	118,400	94,500
†Includes natural-gas gasoline run through refinery pipe lines in California	8,900	9,100	14,500

‡Under new basis.
§Estimated with production of by-product coke as a basis.

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Star No. 44ST Machine cleaning out on Wolverine Oil Co. lease at Avant, Oklahoma.

The Star 44ST Machine is equally efficient on bailing—pulling rods and tubing—pulling casing—cleaning out—drilling old wells deeper—swabbing—drilling in after rotary—plugging wells, etc. It can be kept busy on even a small lease and will pay for itself in savings effected.

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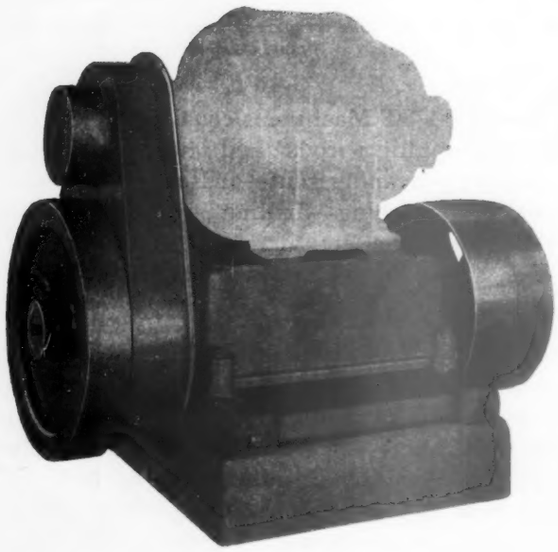

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Coffeyville, Kansas

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 42)

WOODWARD COUNTY

Otstot Development Co.'s No. 1 Simmons, SE cor. SE Sec. 32-24-17w ..... Shut down for pipe 1,420 ft.
Wight & Wahl's No. 1 Williams, C NW Sec. 16-23-20w ... Rig.
Randau & Mooney's No. 1 Parker, SE cor. NE NW Sec. 4-23-16w ..... Shut down 1,092 ft.
Sharon Oil Co.'s No. 1 Elmore, SW cor. SW Sec. 25-21-21w ..... Shut down 2,772 ft.
Burgoyne Brothers' No. 1 Barnes, SW cor. SE NE Sec. 15-21-19w ..... Drilling 700 ft.
Wight & Wahl's No. 1 James, C NW, Sec. 16-23-20w ... Rig.

GARFIELD COUNTY

E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w ..... Hole full water 4,650 ft., shut down 4,720 ft.
Failing et al's No. 1 Gorsuch, SE cor. SE. Sec. 14-24-3w .. Sand 4,681-4,703 ft., show oil, drilling.
Fleming and others' No. 1 Wengert, NW cor. NW Sec. 3-22-5w ..... Shut down 750 ft.
Beopple and others' No. 1 Schweer, C SW NE Sec. 12-21-4w ..... Shut down 1,850 ft.
Marland and Barnsdall's No. 1 Looman, NE SE Sec. 9-20-4w ..... Fishing 5,740 ft.
Marland Oil Co.'s No. 1 Miller, SW cor. SW Sec. 12-20-4w Shut down 4,586 ft., waiting on test Sec. 9-20-4w.

ELLIS COUNTY

Oklahoma Northern's No. 1 Young, NW cor. NW Sec. 9-21-25w ..... Fishing 300 ft.
Hoffman and others' No. 1 Ottes, NW cor. NE Sec. 20-15-8w ..... Rig blown down.

NOBLE COUNTY

Barnsdall Oil Co.'s No. 1 Bumberger, NE cor. NW SE Sec. 11-21-1 ..... Cellar.

KINGFISHER COUNTY

Slick & Harrington's No. 1 Cromer, SE cor. NE NE Sec. 25-19-5w ..... Location.
H. H. Morgan's No. 1 Buscon, SW cor. SE NE Sec. 30-16-9w ..... Shut down 1,610 ft.
Galt-Brown Oil Co.'s No. 1 Wolff, NW SE Sec. 6-16-7w Drilling 400 ft.
McKinney & Crawford's No. 1 Sturgeon, NE cor. SW Section 27-16-6w ..... Drilling 3,972 ft.
Wiley & Manahan's No. 1 Johnson, C NW Sec. 26-16-5w Drilling 4,410 ft.
Reiter-Foster Oil Co.'s No. 1 Unknown, SW cor. SE Sec. 23-15-5w ..... Rig.

LOGAN COUNTY

Champlin Refining Co.'s No. 1 Clark, SE cor. SW Sec. 8-19-4w ..... Fish., 4,775 ft; show gas.
Sinclair Oil & Gas Co.'s No. 1 Webber, SE cor. SE Sec. 15-19-4w ..... Drilling 4,812 ft.
Huckaby & McCoy's No. 1 Perfect, NE cor. NE Sec. 9-13-15w ..... Drilling 1,400 ft.
Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w .. Underreaming 3,750 ft.
Garber & Pulse's No. 1 Widdoes, NE cor. SE NW Sec. 32-18-3w ..... Shut down 1,200 ft.
T. B. Slick's No. 1 Bryan, SW cor. SE Sec. 28-17-1 ..... 5,720-24 ft.; 600 ft. water; shut down.
Willis and others' No. 1 Sweezy, SW cor. NW SE Sec. 20-17-3 ..... Shut down 4,677 ft.
W. R. Ramsey's No. 1 McMillian, NW SW Sec. 24-15-3w ... Hole full of water 4,507-4,517 ft., shut down for orders.
Bu-Vi-Bar's No. 1 Kirkpatrick, NE SW SW Sec. 12-15-1w Shut down 4,504 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w ..... Spudded and shut down.

MUSKOGEE COUNTY

Finefield and others' No. 1 Jobe, NE cor. NW SE Sec. 12-15-18 ..... Sand 1,100-10 ft., dry, shut down 1,252 ft. in lime at contract depth.
J. R. Parks No. 1 Beuge, CWL NE NW Sec. 13-15-19 ..... Drilling 769 ft.
Elk Drilling Co.'s No. 1 Jones, SW cor. SW Sec. 34-13-17 ..... Spudded and shut down.
Sioux Oil Co.'s No. 1 Bradshaw, CEL NW NE Sec. 24-13-18 ..... Drilling 1,310 ft.
L. T. Haney's No. 1 Mitchell, SE cor. NW SE Sec. 33-13-18 ..... Fishing 1,660 ft.
Rolestone and others' No. 1 Hixon, CNL SE NE Sec. 1-13-19 ..... Drilling 1,525 ft.

OKLAHOMA COUNTY

Cromwell Oil & Gas Co.'s No. 1 Proctor, C SE Sec. 21-14-3w ..... Shut down 4,075 ft.
Slick & Bailey's No. 1 Koester, C SE NE Sec. 18-13-3w ... Rigging up standard tools and shut down 3,800 ft.
Cromwell & Franklin's No. 1 Thompson, SW cor. NE NE Sec. 15-12-3w ..... Drilling 6,840 ft.
Cromwell & Franklin's No. 1 Gross, SW cor. NE SW Sec. 22-10-2w ..... Shut down 4,702 ft.

CREEK COUNTY

Lima O. & G. Co.'s No. 1 Grayson, NW cor. NE NE, Sec. 11-14-7 ..... Shut down 3,650 ft.; will probably abandon.

CANADIAN COUNTY

T. B. Slick and others' No. 1 Pazowrech, NW SE Sec. 29-13-5w ..... Hole full of water 4,338-4,452 ft., shut down 4,580 ft.
Ramsey Brothers' No. 1 Newman, CSL NE Sec. 9-11-7w .. Drilling 4,212 ft.

LINCOLN COUNTY

Bu-Vi-Bar Petroleum Co.'s No. 1 School Land, C NE SE Sec. 16-13-4 ..... Shut down 4,500 ft.

OKFUSKEE COUNTY

Prairie Oil & Gas Co.'s No. 1 Gray, SW cor. SW Sec. 19-11-7 ..... Cleaning out 3,905 ft.
Moose & Daniels' No. 1 Stidham, SW cor. NW Sec. 4-11-10 ..... Shut down 622 ft.

SEQUOYAH COUNTY

Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-23 ..... Rigged up and shut down.
Citizens Gas Co., No. 1 Greenstreet, SW cor. NE SE Sec. 33-12-27 ..... Rig.

POTTAWATOMIE COUNTY

Shaffer-Kilgore-Sykes' No. 1 Ives, C SE SE Sec. 12-10-3 ..... Drilling 5,012 ft.
Prairie Oil & Gas Co.'s No. 1 Lumbley, SW NW SE Sec. 1-10-5 ..... Drilling 4,720 ft.
Central Commercial Oil Co.'s No. 1 McCrain, NW cor. NE SW Sec. 16-10-5 ..... Drilling 4,765 ft.
Superior Oil Co.'s No. 1 Herminghausen, SW cor. NW NE. Sec. 24-8-2 ..... Drilling 4,234 ft.
Davy & Detrick's No. 1 McGehee, SW SE NW Sec. 10-6-2 ..... Fishing 4,998 ft.
Amerada Pet. Corp.'s No. 1 Gravel, SW SE NE, Sec. 1-8-4 ..... Drilling 3,986 ft.

CADDO COUNTY

Magnolia Petroleum Co's No. 1 Shelby, SW cor. SW Sec. 28-10-12w ..... Drilling 2,315 ft.
J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w .... Shut down 150 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w ..... Shut down 3,294 ft.

OSAGE COUNTY

Indian Terr. Ill. Oil Co.'s No. 1, SE cor. NE Sec. 8-25-7 .. Drilling 3,125 ft.
Prairie Oil & Gas Co.'s No. 1, SE cor. NE Sec. 11-24-6 .... Drilling 3,084 ft.
Devonian Oil Co.'s No. 1, NW cor. SE Sec. 18-22-8 ..... Sand 2,260-2,315 ft., 4,000,000 ft. of gas went to water; probably abandoned.

SEMINOLE COUNTY

T. B. Slick's No. 1 School Land, SE cor. SE Sec. 16-6-5 ... Rigging up.
Roxana and Barnsdall's No. 1 Stidham, NW cor. NE Sec. 6-10-7 ..... Location.
Prairie Oil & Gas Co.'s No. 1 Davis, NE SE Sec. 21-10-7 .. Rig.
Prairie Oil & Gas Co.'s No. 1 Varnum, NW cor. SW SW Sec. 5-9-6 ..... Drilling 4,280 ft.; hole full water.
The Texas Company's No. 1 Reed, SW cor. SW Sec. 12-8-5 ..... Wilcox sand 4,720 ft; hole full water; probably will abandon.
Twin State Oil Co.'s No. 1 Walker, NE cor. NE Sec. 5-7-6 ..... Rig on ground.
Simon & Bean's No. 1 Palmer, SE cor. NW NE Sec. 7-7-6 ..... Rigged up and shut down.
Reiter-Foster Oil Co.'s No. 1 Coat, SW cor. NW SW

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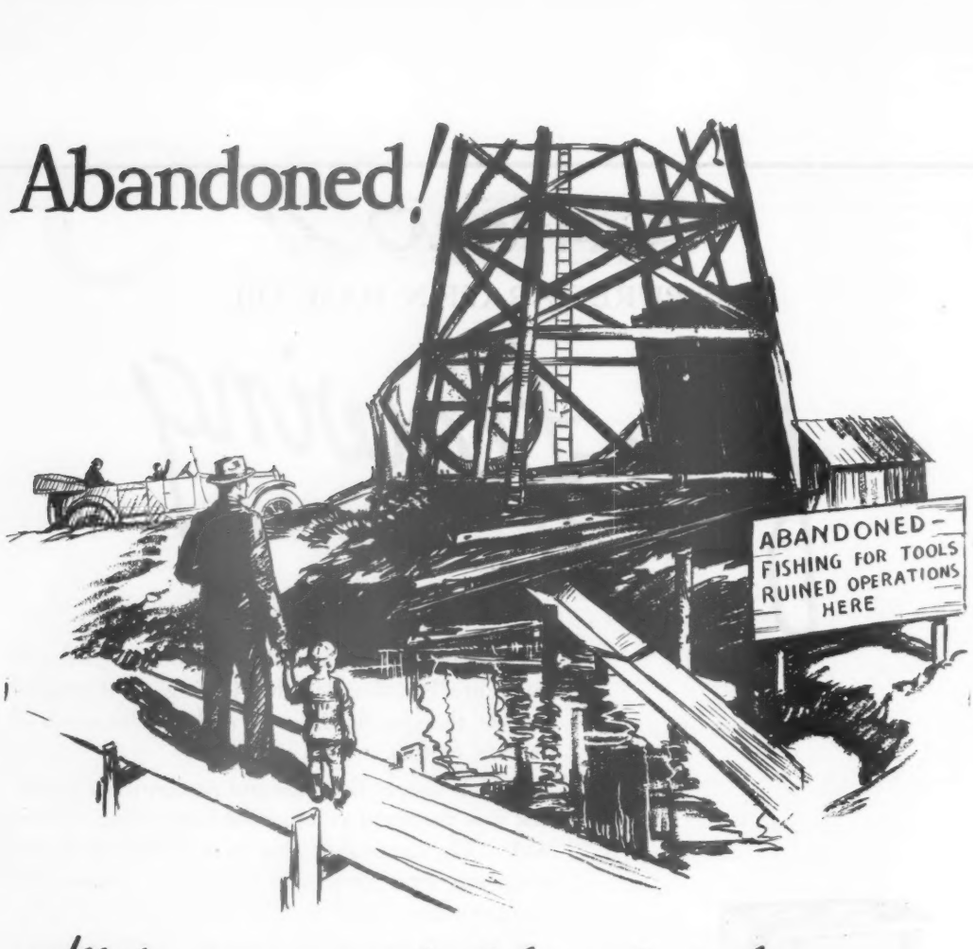

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Sec. 14-7-6 ..... Spudding.
Indian Territory Illuminating Oil Co.'s No. 1 Marshall, NW NW SW Sec. 32-7-7 ..... Fishing 4,759 ft.
Magnolia Petroleum Co.'s No. 1 Vierson, SE SE NW Sec. 5-6-7 ..... Drilling 3,800 ft.
Gardner Petroleum Co.'s No. 1 Unknown, NW cor. SE Sec. 26-6-7 ..... Drilling 3,015 ft.
Fuhrman Petroleum Co. and Superior Oil Co.'s No. 1 Davis, SW SW SE Sec. 3-10-6 ..... Location.

BECKHAM COUNTY

C. & H. Petroleum Co.'s No. 1 Barnes, SW cor. NW NE Sec. 32-9-22w ..... Shut down 3,800 ft.
Pferffel and others' No. 1-A Carter, NE cor. NE Sec. 35-9-22w ..... Shut down 300 ft.

GRADY COUNTY

Remington and others' No. 1 Fryrear, SW SW NE Sec. 13-9-5w ..... Shut down 720 ft.; may start up soon.
Bedner and others' No. 1 Willis, C SW NW Sec. 13-7-5w ..... Shut down 2,450 ft.
Nichlos & Page's No. 1 Drake, SE NE SE Sec. 7-5-7w ..... Shut down 1,900 ft.
Wirt Franklin Petroleum Co.'s No. 1 Garden, SE cor. SW NE Sec. 1-4-7w ..... Drilling 1,968 ft.
Commercial Development Co.'s No. 1 Chrisman, C NE NE Sec. 21-4-7w ..... Spudded.
Magnolia Petroleum Co.'s No. 1 Pursley, SE SW NW Sec. 8-4-6w ..... Drilling 3,427 ft.

MCINTOSH COUNTY

Marione Oil Co.'s No. 1 Sanders, NW cor. NE SW Sec. 10-9-18 ..... Shut down 2,250 ft.

CLEVELAND COUNTY

Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w ..... Drilling 3,014 ft.

KIOWA COUNTY

A. C. Varner and others' No. 1 Bonham, CSL NW NW Sec. 5-6-18w ..... Shut down 1,127 ft.

POTTOTOC COUNTY

Gillespie & Gant's No. 1 Taylor, SW SW SE Sec. 12-5-4 .. Sand 2,818-52 ft., water; plugged back 2,570 ft., shot 80 and 20 quarts; swabbed 29 bbls.; shut down.
T. B. Slick's No. 1 Barnett, NE SE NW Sec. 13-5-6 ..... Drilling 3,916 ft.
Sinclair Oil & Gas Co.'s No. 1 McDaniel, NE cor. NE Sec. 17-5-6 ..... Drilling 3,620 ft.
Mid-Continent Petroleum Corp.'s No. 1 Harjo, SE NE NE Sec. 14-5-7 ..... Sand 2,614-32 ft.; show oil; testing sand.
T. B. Whitney and others' No. 1 Moore, SE SW Sec. 17-5-9 ..... Drilling 1,215 ft.
Winkler and others' No. 1 Tiner, C SW SE Sec. 31-5-9... Shut down 2,761 ft.
Dixie Oil Co.'s No. 1 Perkins, SE NW Sec. 15-4-1 ..... Drilling 4,480 ft.
R. F. Garland's No. 1 Strickland, SW NW SW Sec. 10-4-3 ..... Reaming 2,650 ft.
Marland Oil Co.'s No. 1 Lawrence, C SW SE Sec. 10-4-4.. Drilling 1,710 ft.
C. J. Shervin and others' No. 1 Wright, NW NE NE Sec. 13-4-6 ..... Shut down 1,925 ft.
Boles and others' No. 1 Rayburn, SW SE Sec. 35-4-6 .... Shut down 1,340 ft.
J. E. Crosbie's No. 1 Nowabbi, SE NE SW Sec. 8-4-7..... Testing sand 1,044-54 ft.; show oil, estimated 60 bbls. day.
Texas-Pacific Coal & Oil Co.'s No. 1 Stewart, C SW SE Sec. 11-5-8 ..... Drilling 2,230 ft.
Henry and others' No. 1 Gregg, SW SE NW Sec. 14-4-7... Shut down 1,090 ft.
Oklahoma Portland Cement Co.'s No. 1 Mathews, C SW NW Sec. 24-4-7 ..... Drilling 1,214 ft.

GARVIN COUNTY

Magnolia Petroleum Co.'s No. 1 Vaughn, NW SW NW Sec. 12-3-1 ..... Drilling 4,860 ft.
Heath & Bauman's No. 1 Hatfield, SW SE SW Sec. 10-3-3 ..... Shut down 1,640 ft.

COMANCHE COUNTY

Jolly-Ogg Oil Co.'s No. 1 Neeley, SE NE Sec. 24-3-10w.... Drilling 1,800 ft.
Ashcraft and others' No. 1 School Land, SE cor. SE Sec. 20-2-10w ..... Broken sandy lime 822-954 ft.; swabbed 3 bbls.; total depth 975 ft.; shut down; material moved out.
Jenkins and others' No. 1 Smith, SW cor. SE SE Sec. 34-1-10w ..... Shut down 1,530 ft.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w.. Cleaning out 3,310 ft.

COAL COUNTY

Revels & Magee's No. 1 Labor, NW cor. NW Sec. 17-1-2.. Shut down 240 ft.
McGraw and others' No. 1 Patton, SW SE NE Sec. 25-1-8 ..... Shut down 973 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Harris, SW cor. NW Sec. 10-1-11 ..... Fishing 1,630 ft.

OKLAHOMA PANHANDLE
CIMARRON COUNTY

Phillips and others' No. 1 Unknown, NW cor. NW Sec. 24-6-2 ..... Drilling 4,200 ft.
Sinclair Oil & Gas Co.'s No. 1 School Land, NW cor. NW Sec. 22-5-2 ..... Fighting cave 4,624 ft.
Ramsey Brothers' No. 1 School Land, NE SW SW Sec. 21-5-5 ..... Shut down 100 ft.
Ramsey Brothers' No. 1 Unknown, NW NE Sec. 27-5-5... Plugging back to show of oil 4,295 ft.
Ramsey Brothers' No. 1 School Land, SE SE Sec. 34-4-1.. Drilling 3,165 ft.
Gladys-Belle Oil Co.'s No. 1 Iserial, SW NE Sec. 25-3-7.. Drilling 4,317 ft.
Valerius & Wilkinson's No. 1 Unknown, SE cor. NE Sec. 25-3-7 ..... Shut down 2,545 ft.
H. F. Wilcox Oil & Gas Co.'s No. 1 Zea, NE SW Sec. 28-3-13 ..... Shut down 3,765 ft.
Skaer and others' No. 1 Mathis, SW NE NE Sec. 17-3-23.. Drilling 3,227 ft.
Ross Fenton and others' No. 1 Graves, NE NE Sec. 2-2-9.. Spudded and shut down.

TEXAS COUNTY

Danner Oil Co.'s No. 1 Graves, NE cor. SW SW Sec. 23-2-18 ..... Shut down 700 ft.
Newsom and others' No. 1 Allison, SE SE Sec. 4-1-12.... Shut down 4,040 ft.
Dotton and others' No. 1 Baker, C NW Sec. 4-1-13 ..... Rig blown down.
H. & H. Oil Co.'s No. 1 Hitch, NE cor. NE, Sec. 26-1-15... Shut down 600 ft.
Three Way Oil Co.'s No. 1 Cane, SW NW Sec. 11-1-18.... Hole full of water at 3,318-58 ft.; drilling.
Conley and others' No. 1 Unknown, SE cor. NW Sec. 5-1-19 ..... Spudded and shut down.
Texas County Gas Co.'s No. 1 Bacon, C NE NE Sec. 17-3-15 ..... Drilling 1,324 ft.

SOUTHERN OKLAHOMA
BRYAN COUNTY

Green Oil & Ref. Co.'s No. 1 Kemp, SE cor. NW NW Sec. 28-8s-9 ..... Shut down 600 ft.
Alexander & Oppenheimer's No. 1 Hampton, SE cor. NE Sec. 26-7s-11 ..... Shut down 1,425 ft.

JEFFERSON COUNTY

J. R. McCoy and others' No. 1 Smith, SE cor. NW Sec. 14-7s-6w ..... Rigged up and shut down.
W. Bassett's No. 1 Johnson, NE NW Sec. 15-6-8w ..... Location.
Amerada Petroleum Co.'s No. 1 Emerson, NW cor. SE SW Sec. 28-5s-8w ..... Location.

CHOCTAW COUNTY

Hugo Gay's No. 1 Smith, SE cor. SW NW Sec. 27-6s-16... Shut down 1,540 ft.
Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-19 ..... Shut down 1,346 ft.

TILLMAN COUNTY

A. N. Pearson's No. 1 Mounts, SW cor. SW Sec. 3-5s-15w.. Rig.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-16w ..... Shut down 2,350 ft.

MARSHALL COUNTY

Laurel Oil & Gas Co.'s No. 1 Chastine, SE NW Sec. 26-4s-5 ..... Shut down 3,145 ft.
Magnolia Petroleum Co.'s No. 2 Marshall, SW cor. NW SW Sec. 26-5s-7 ..... Drilling 943 ft.
Alter and others' No. 1 Brown, NE cor. NW NW Sec. 11-4-6 ..... Drilling 218 ft.

STEPHENS COUNTY

Pierce & Brown's No. 1 Garland, SE NW NE Sec. 34-2s-6w ..... Shut down 1,700 ft.

JOHNSTON COUNTY

McPherson and others' No. 1 Wyand, CSL NE NW Sec. 7-2s-9 ..... Shut down 4,440 ft.
Wapanucka Oil Co.'s No. 1 Banks, Sec. 28-2s-9 ..... Shut down 1,530 ft.

CARTER COUNTY

Grooms and others' No. 1 Morris, CSL NW NE Sec. 19-1s-2w ..... Shut down 3,463 ft.

MURRAY COUNTY

Thompson Oil Co.'s No. 1 Freeman, SE cor. Sec. 27-1s-2.. Rig.
Gilcrease Oil Co.'s No. 1 Wolf, SE cor. NE Sec. 20-1-2.... Spudded.

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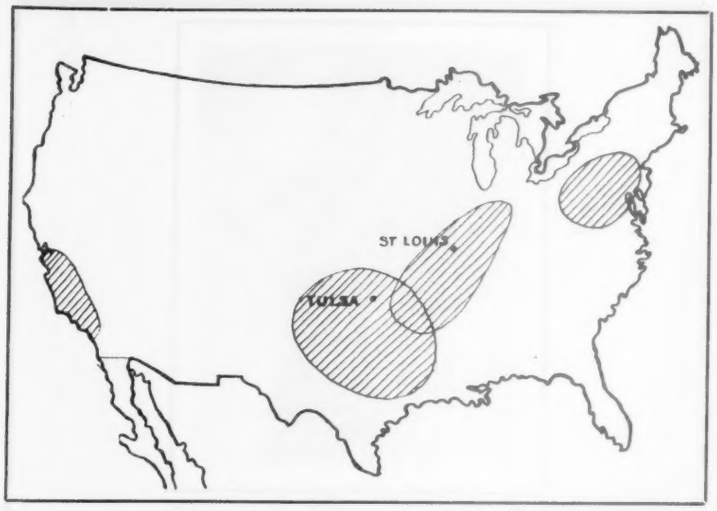

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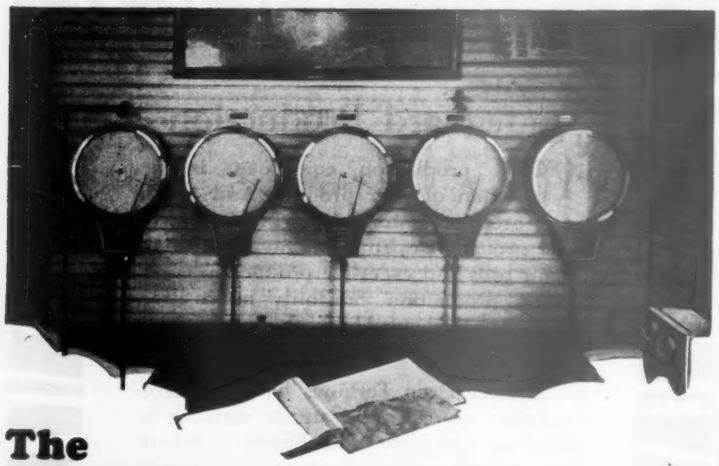

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KANSAS WILDCATS

(Continued from Page 44)

E. B. Shawver and others' No. 1 Disser, NW cor. NW Sec. 10-34-3 ..... Fishing 1,426 ft.
E. B. Shawver's No. 1 Mullett, C NW SE Sec. 31-34-3 ..... Drilling 630 ft.
Vickers Petroleum Co.'s No. 1 Daniels, NE cor. NW Sec. 3-30-3 ..... Shut down 1,800 ft.
E. B. Shawver No. 1 Mullett, C NW SE Sec. 31-34-3; gas rights only ..... Spudded and shut down.

DICKINSON COUNTY

McBride & Goen's No. 1 Shirley, NE cor. SW Sec. 21-12-4 ..... Shut down 2,120 ft.

ELLIS COUNTY

J. H. Tatlock et al's No. 1 Leiker, NW cor. NE NE Sec. 26-13-16w ..... Sand, 3,227-40 ft; 10 bailers of water; shut down.
R. H. Hood and others' No. 1 Butler, C SE SE Sec 15-26-11 ..... Machine.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, SE cor. NE SW Sec. 27-8-25w ..... Shut down 3,270 ft.

GREENWOOD COUNTY

Carnes & Bly's No. 1 Smith, NE cor. SE Sec. 4-24-13 ..... Drilling 1,400 ft.
Eureka Oil Co.'s No. 1 Brothers, SE cor. NW Sec. 35-23-11 ..... Drilling 2,489 ft.
C. A. Devine's No. 1 Bradford, SW cor. NE Sec. 22-26-11 ..... Shut down 600 ft.
C. E. Hawks' No. 1 Lessman, SE cor. SW Sec. 14-21-10 ..... Shut down 1,720 ft.
T. C. Johnson's No. 1 Knox, NE cor. NW Sec. 8-23-13 ..... Shut down 1,705 ft.
Kismet Oil Co.'s No. 1 Richardson, SW cor. NE SW Sec. 26-22-11 ..... Location.
Sharpless and others' No 1 Corder, SW cor. SE SE Sec. 22-23-12 ..... Shut down 1,310 ft.
Smith & Rockhill's No. 1 McDair, NW cor. SE, Sec. 30-26-12 ..... Drilling 1,730 ft.

HARPER COUNTY

Barbara Oil Co.'s No. 1 Blunk, C NW NE Sec. 20-34-13w ..... Drilling 1,800 ft.
Amerada Pet. Corp.'s No. 1 Mendiville, C SE SE, Sec. 24-34-6w ..... Fishing 4,625 ft.
Sam Jarvis' No. 1 Wyckoff, SW cor. NW Sec. 11-34-4w ..... Drilling 4,268 ft.
Sam Jarvis' No. 1 Warneke, SE cor. SW sec. 4-34-3w ..... Shut down 4,207 ft.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 ..... Rigged up and shut down.

KINGMAN COUNTY

James Madison's No. 1 Ballein, SW cor. NW NW Sec. 21-28-5 ..... Drilling 3,610 ft.

LANE COUNTY

Robinson and others' No. 1 Dickerson, SW cor. NW SE Sec. 11-18-27w ..... Cleaning out 2,645 ft.

LOGAN COUNTY

W. H. Koons', Trustee No. 1 Edwards, NW cor. NW Sec. 14-14-33w ..... Shut down 4,310 ft.

MARION COUNTY

Anderson Brothers' No. 1 Benth, SE cor. SW SW Sec. 31-18-5 ..... Drilling 2,100 ft.
Franks et al's No. 1 Wright, SW cor. NW NW, Sec. 9-19-4 ..... Rig.
Givens and others' No. 1 Ucker, SW cor. NE Sec. 31-17-4 ..... Underreaming 1,830 ft.
T. C. Johnson's No. 1 Thompson, SW cor. NE Sec. 26-17-4 ..... Drilling 1,714 ft.
Sun Ray Oil Co.'s No. 1 Lehrman, SW cor. NE SE Sec. 1-21-4 ..... Fishing bailer 2,750 ft.

MEADE COUNTY

Blackwell Oil & Gas Co.'s No. 1 Boyer, SE cor. NW SE Sec. 9-33-28w ..... 8-in. casing 3,205 ft.; total depth 3,315 ft.; shut down.

MORRIS COUNTY

Cress & Hawkey's No. 1 Grendier, NW cor. SE Sec. 16-15-5 ..... Drilling 800 ft.
Hugh Faulder's No. 1 Wendt, SW cor. SE SE, Sec. 18-15-5 ..... Rig.
Fisher & Louck's No. 1 Stroda, NW cor. SE Sec. 8-16-5 ..... Underreaming 2,210 ft.
Graham Brothers' No. 1 Nelson, NE cor. SE Sec. 30-17-5 ..... Drilling 1,420 ft.
Matthews and others' No. 1 Walters, SW cor. NE Sec. 14-15-5 ..... Spudded.
Moss & Nelson's No. 1 Smith, SW cor. SW Sec. 18-16-5 ..... Rig.
Skelton and others' No. 1 Illes, NW cor. NW Sec. 25-16-5 ..... Rig.

McPHERSON COUNTY

Franks and others' No. 1 Wright, SW cor. NW NW Sec. 9-19-4 ..... Rig.
D. I. Hall's No. 1 Gray, NW cor. SE NW Sec. 20-20-3w ..... Spudded and shut down.
C. W. Lamer's No. 1 Lamer, SE cor. SW Sec. 1-17-3w ..... U.R., 3,495 ft.
The Texas Company's No. 2 Chinberg, NW cor. NE NW Sec. 32-18-2w ..... Underreaming 2,270 ft.
Danciger Oil Co.'s No. 1 Willem, NW cor. SE SE Sec. 6-22-4w ..... Rig and tools.

OSBORNE COUNTY

Prather-Davis-Krueger's No. 1 Pruter, SW cor. SE Sec. 30-9-15w ..... Shut down 2,360 ft.

PAWNEE COUNTY

Frank Hopper and others' No. 1 Seifers, NW cor. SW NE Sec. 23-21-11w ..... Drilling 3,741 ft.
F. C. Troupe's No. 1 Lovett, C EL NE NE Sec. 31-21-16w ..... Drilling 1,700 ft.

POTTAWATOMIE COUNTY

J. J. Crawford's No. 1 College, C W L SW NE Sec. 11-10-12 ..... Shut down 2,350 ft.

RENO COUNTY

Danciger Oil & Refining Co.'s No. 1 Williams, NW cor. SE SE Sec. 6-22-4w ..... Moved in tools.
Stearns-Streater & Marshall's No. 1 Crabb, SE cor. SW NE Sec. 1-25-8w ..... Rig.

RICE COUNTY

Allison & Fitzwilliams' No. 1 Poland, NE cor. SW NE Sec. 36-19-8w ..... Cellar.

RILEY COUNTY

Mutual Oil Co.'s No. 1 Marka, SE cor. NE NW Sec. 26-10-6 ..... Shut down 2,400 ft.

ROOKS COUNTY

Keys Petroleum Co.'s No. 1 Rathburn, NE cor. SW Sec. 14-9-16w ..... Shut down 1,350 ft.
Krueger and others' No. 1 Poore, NE cor. NE Sec. 14-8-16w ..... Spudded and shut down.
Stearns & Streater's No. 1 Matheson, NE cor. SE NW Sec. 28-10-16w ..... Drilling 3,462 ft.

RUSH COUNTY

Valerious & Chenney's No. 1 Sheverman, NW cor. SE NW Sec. 27-17-17w ..... Spudded and shut down.

SALINE COUNTY

Cress & Hawkey's No. 1 Grendier, NE cor. SE Sec. 16-15-5 ..... Rig.
Hugh Faulders' No. 1 Wendt, SW cor. SE SE Sec. 18-15-5 ..... Rig.
Mento Oil & Gas Co.'s No. 1 Muir, SW cor. SW Sec. 17-15-2w ..... Underreaming 3,205 ft.

SEWARD COUNTY

T. B. Slick's No. 1 Pyle, NE cor. NE Sec. 14-33-32w ..... Shut down 1,350 ft.

SHERMAN COUNTY

A. L. Hensen and others' No. 1 Murry, NE cor. SE NW Sec. 22-7-4w ..... Shut down 2,650 ft.

SMITH COUNTY

Smith & Buchner's No. 1 Rice, SW cor. SW Sec. 18-5-15w ..... Rig.

STAFFORD COUNTY

Randall-Johnson's No. 1 Richardson, NW cor. SW Sec. 24-22-11w ..... Rig on ground.
Kismet Oil Co. No. 1 Richards, SW cor. NE SW Sec. 24-22-11w ..... Location.

SUMNER COUNTY

Otstot and others' No. 1 Barlow, SE cor. SE Sec. 22-33-3w ..... Shut down 1,860 ft.
Gypsy Oil Co.'s No. 1 Douglas, NE cor. SE NW Sec. 23-34-2w ..... Top Wilcox, 4,493 ft; T.D., 4,500 ft; est. 200 bbls; S.D.

WAUBANSEE COUNTY

Empire Gas & Fuel Co.'s No. 1 Schuaem, SE cor. SE Sec. 19-12-11 ..... Fishing 3,320 ft.

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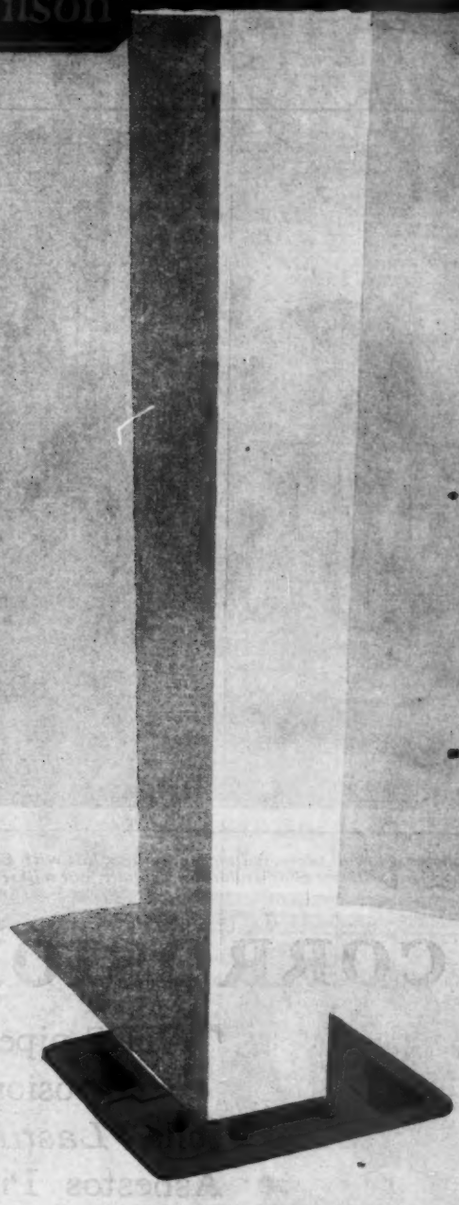

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KENTUCKY-TENNESSEE

(Continued from Page 60)

Bartlett heirs farm, in the Ambrose Pool, is said to be a duster. Some very fine producers have been found on this lease. No. 9, same farm, is drilling.

The Ohio Oil Co.'s No. 13 on the J. C. Ellis farm, same pool, is reported with an initial of 80 bbls. Same company's test on the J. J. Keown farm, near the Antioch Church, is reported dry, and is between the Midkiff and Ambrose Pools, and went to a depth of 931 feet.

White Plains Oil & Gas Co.'s No. 3 Ada Kelly is reported good for around 50 bbls. initial production.

Rex-Pyramid Oil Co.'s No. 11 W. S. Ambrose farm, in the Ambrose Pool, did 75 bbls. initial; while No. 12, same lease, showed an initial of 30 bbls. No. 2 is drilling on the Lake-Ambrose farm, same pool.

Wood Oil Co.'s No. 24 on the Mary J. Elmore 110 acres, Ambrose Pool, showed an initial of 50 bbls., as did its No. 1 on the F. M. Moseley 100 acres, in the Sunnydale Field. Same company's second well on the V. R. Ferguson 60 acres, in the Sunnydale Field, set a string of 395 feet of casing, struck sand at from 416 to 429 feet and went to a total depth of 442 feet, shooting with 60 quarts, bringing in a 25-bbl. initial producer. No. 25 is under way on the Mary J. Elmore 110 acres, in the Ambrose Pool.

Buckner and others' No. 3 on the E. G. Owen 80 acres in the Ambrose Pool is rated at 25 bbls. initial production.

L. C. Young and others' well on the Len Sparks farm is reported at 30 bbls. initial production.

Garrison & Evans have abandoned their second well on the Don Mitchell farm, near Bells Run, northwest of the Ambrose Pool, as a dry hole, there not being enough to pay for putting it on the pump.

Pampas Oil Co.'s No. 4 on the L. Trodgan 90 acres, southwest of Union Grove Church, is a duster.

In the extreme western part of Ohio County, west of Buford and near the Gilbert Jolly well, the Leeper Oil Co.'s No. 1 Fred Weir farm, is rated at 15 bbls.; while No. 2 is said to show for better than 50 bbls.

Daviess County Wells

The Atlantic Refining Co.'s test on the Trodgen farm, in Daviess County, is said to show better than 75 bbls. initial production, and extending production some distance.

L. C. Young and others' second test on the W. G. Hayden farm, same county, and near the Ohio County line, and about 2 miles north of Maxwell, is reported at 60 bbls. initial production.

Engle and others' No. 1 on the Flora Rice farm, near the Hayden wells, is reported a dry hole.

Allen County

In the Gainesville area of the Scottsville Field of Allen County, Logan & Johnson's second test on the William French farm, struck a dose of water at 210 feet and goes down as a dry hole.

Reports are that the Ohio Oil Co. is in the sand in its No. 2 on the Ray Rhodes farm, at Aetnaville, in Ohio County, with a fair oil showing.

Miller & Damron's second test on the Jim Brown farm, near Utica, in Daviess County, is drilling. No. 1 on this lease is among the best wells found in the county. It is a month or so old, and still reported flowing around 100 bbls. daily.

Bert Haley's well, drilling by Doug Bowland, 2 miles west of Utica, in Daviess County, is down around several hundred feet.

Murray & Young are getting near where pay sand should be found in a test on the Lloyd Leachman farm, a couple of miles north of Calhoun, in McLean County. This well is being drilled with a standard outfit, in case a deep test is required. Same parties are drilling a test on the Glenn Mitchell farm, near Cleopatra, in the same county.

A wildcat is drilling by Rowe, Smith and others on the W. H. Smeathers farm, in the extreme eastern part of Daviess County, near the Hancock County line. This well is to test a block of 2,200 acres of leases.

A string of 1,358 feet of casing was set in the test on the Lem Ford farm, near the Ratliff well of Dimmick Brothers, in McLean County, to test out the Dimmick sand.

Randolph, Smith & Westerman are working at a test on the J. W. Taylor farm, a mile east of Nuckols and 2 miles west of the Gilbert Jolly well, in McLean County.

Hance and others are drilling on the J. W. Pursell 15 acres, a mile west of Whitesville, in Daviess County.

The Bartiletti-Meany Development Co., of Pittsburgh, is starting a well on the Dr. T. B. Sanders 20 acres at Birk City, in the extreme western part of Daviess County, and far in advance of production. Several rigs are reported getting ready to start operations across the Daviess County line from Birk, in Henderson County.

MICHIGAN FIELDS

(Continued from Page 60)

nances should be passed by your commission at the earliest possible moment," Mr. Jerome advises. "If you could get an ordinance passed prohibiting drilling for oil within your city limits, you would need no other protection. If this cannot be done, then you should have ordinances restricting the operation during drilling, prohibiting the drilling in certain areas, and restricting the method of caring for the oil after the drilling operation is completed," he continued. "Among these ordinances I would consider most important one providing that no drilling should be done within 100 feet of any residence or other building, or within 100 feet of any street line. The first restriction would be for fire protection and the latter for protection of the sewer and water pipes.

"An ordinance to provide that each container for oil should be surrounded with a dike, or ditch, sufficiently large to hold the entire contents of the container in event it is struck by lightning or explodes, also should be passed for fire protection. There should also be a provision governing the installation of electric and gasoline pumps to avoid the ignition of oil and gas in any pump house. This is for protection of the life of the operator. There also should be an ordinance governing the use of nitroglycerin and one to fix the responsibility for damage to surrounding property upon the drilling operators."

Mr. Jerome, who has studied drilling on city lots in several Pennsylvania cities, stated that he found one city in that State with an ordinance that in the event more than a gill of nitroglycerin was to be carried through the streets of the city there must first be a permit issued by the council, a special container built for the explosive, a special carrier built to give protection against shock to the container, a police officer employed to precede the conveyance, and another one to follow, all at the expense of the operator.

"As far as Saginaw is concerned," writes Mr. Jerome, "the development of oil on city lots is a thing of the past. The pumps were placed so close together that they have been pumping against each other, and are now not worth the current necessary to pump them. You could not get a lease for drilling a well on any city lot in Saginaw today because, first, the owner would not lease it; second, it would not repay the cost of drilling, and third, the zoning ordinance has practically eliminated further drilling in the residential portion."

CENTRAL WEST FIELDS

(Continued from Page 63)

of locations for immediate drilling, and practically every farm in Mohican and Perry Townships is under lease, as well as a number of small tracts in the village of Jeromesville.

This new Jeromesville Field gives promise of covering a large territory, owing to the finding of a large amount of oil in the Berea sand while drilling deep Clinton sand gas wells. The field is practically proven by these shows in

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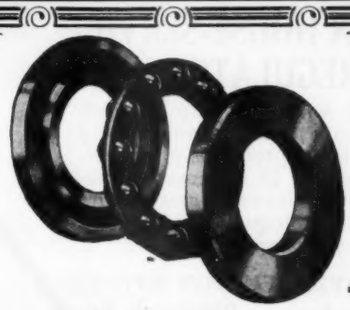

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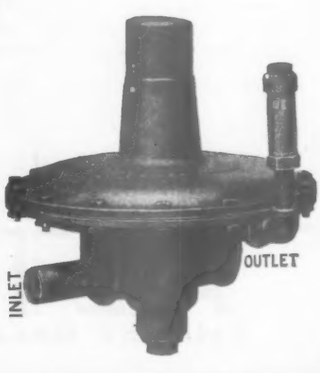

the Berea in the deep gas wells drilled 5 miles northeast of Jeromesville to the village of Mohican 5 miles southwest, a distance of 10 miles, and for a distance of 4 miles wide. Practically all lands in Mohican and Perry Townships are under lease in the Jeromesville Field, some by the Ohio Fuel Co., the Logan Gas Co., Robinson Brothers, Ray B. Grimm, Brown & Stoler, George VanTilburg & Co., Geiger & Co., George S. Lacknett, Pittsburgh; J. H. Harmon, Mansfield, Ohio; R. A. Watts, Columbus, Ohio; D. Hendershot & Co., Mount Vernon, Ohio; E. V. Zanhiser of Washington, Pa., and many others from West Virginia and Pennsylvania.

With wells such as found by Robinson Brothers secured at shallow depth, and in the highly sought Berea sand, with the amount of good pay sand found and the ideal operating conditions that prevail in this new Jeromesville Field, it is safe to predict that within a short time it will take its place as one of the most active fields in Ohio.

Ashland County

In Sullivan Township, Ashland County, Hulse & Kundtz's test in the southeast corner of the J. M. Slack 99 acres, Lot 42, is a dry hole. The Logan Gas Co. has one of the same kind in a second test, 1,160 feet from the north line and 450 feet from the east line of the John J. Smith 80 acres, Lot 82.

In Clear Creek Township, same county, the Kemrow Co.'s test, 450 feet from the north line of the Hulda Shaw 15 acres, Section 13, and 450 feet west of the highway, same in a duster. Faulkner and others' test, 610 feet south of the road, on the Eliza Batdorf 43 acres, is a dry hole.

Hawk and others are drilling a second test, 225 feet south of the road and 625 feet from the east line of the M. A. Strine 98 acres, Lot 25, Vermillion Township, same county.

The Logan Gas Co. made the location for a test, 1,320 feet from the south line and 354 feet from the west line of the Sava Baba 40 acres, Section 7, Orange Township. Ohio Fuel Gas Co. is drilling a test 660 feet from the south and west lines of the M. H. Kennedy 40 acres, Section 19, Hanover Township; and the Logan Gas Co. made a location for a test, 590 feet from the south line and 660 from the west line of the Peter Sharp 60 acres, Section 20.

Medina County

The Ohio Fuel Gas Co. drilled in a duster in a test 1,300 feet from the north line and in the center of the east and west line of the Edward J. Bauer 37 acres, Section 1, Liverpool Township, Medina County. Same company abandoned its second location on the William Rudes 63 acres, Section 14, Lafayette Township, and staked a location for a second test 700 feet from the north line of the John H. Grimm 180 acres, known as the Merrick tract, and 1,600 feet from the No. 1 same farm.

Ohio Fuel Gas Co. is drilling a test 800 feet from the north and east lines of the John Austin Realty Co.'s 106 acres, Lot 52, Hinckley Township. Same company made a location for a test on the Charles M. Mix farm, Lot 23, Brunswick Township; also made a location for a test 1,100 feet from the south line and 660 feet from the west line of the Herman Munson 65 acres, Lot 49, Montville Township, same county.

Other Developments

In Columbia Township, Lorain County, the Ohio Fuel Gas Co. drilled in a fairly good gas well in No. 1 on the Carrie Boone 32 acres, Lot 26. The gas was found in the Newburg sand.

In Wayne County, Chester Township, the Logan Gas Co. drilled a dry hole in a test 660 feet from the north line and 745 feet from the east line of the Godfrey F. Marti 130 acres, Section 5. B. B. Cameron and others' test on the Julia Iches farm, same section, was a duster. In Congress Township, the Ohio Fuel Gas Co. is drilling a test 1,320 feet from the north and west lines of the R. B. Ferguson 160 acres, Section 15, and No. 1 well, 750 feet from the south line and 1,300 feet from the east line of the Ernest Stratton 100 acres, Section 4. Same company made a location for a test 1,320 feet from the north line and 810 feet from the east line of the C. E. Palmer 97 acres, Section 20. In Sugar Creek Township, the Logan Gas Co. is drilling a test 725 feet from the north line and 660 feet from the west line of the H. S. Eckhard 83 acres, Section 11.

Empire Gas & Fuel Co. has abandoned its test as dry on the Adam Karach 101 acres, Section 7, Salt Creek Township, Holmes County, at a depth close around 4,000 feet.

East Ohio Gas Co. brought in a fair gas well at a test 660 feet from the north and east lines of the Peter Shellhorn 40 acres, Section 2, Monroe Township, Coshocton County.

In the Cleveland Field of Cuyahoga County, John Arthur's second well on the G. W. Wagner farm, Lot 32, Olmstead Township, is an average gas producer. McGrath and others are drilling a test in the northwest corner of the Emma L. McMahon 2 acres, Lot 31, same township, and made a location for a test 650 feet from the north line and 30 feet from the east line of the C. Doerner 10 acres, Lot 29, same township. Empire Gas & Fuel Co. made a location for No. 3 well, in the northeast corner of the W. O. and E. M. Whitney 88 acres, Lot 32, Strongville Township. In Dover Township, same county, J. W. Cushing's test in the southwest corner of the J. A. Limpert 14 acres, Lot 6, is a good gas producer. John Arthur's test is 50 feet from the east line and 80 feet south of the road on the A. E. Guage 1 acre, Lot 7, same township.

Benedum-Trees Co. is preparing to start a test on the J. B. Frost farm, Section 14, Mantau Township, Portage County, which will be drilled to test out the first and second Berea sand formations. Wittmer Oil & Gas Co. is drilling a test in Mason Township, Lawrence County.

NEW DIRECTORS NAMED BY GLADYS-BELLE CO.

At the annual meeting of the board of directors of the Gladys-Belle Oil Co. and Marquette Oil Co., which was held on Monday, March 5, the following officers and directors were elected: Harrison S. Green, president; X. R. Gill, vice president; Harry Slater, vice president; J. C. Miller, assistant secretary and treasurer; Eugene Miller, assistant secretary.

The newly elected board of directors is composed of Harrison S. Green, M. M. Doan, R. P. Brewer, J. C. Miller, William H. Foster, Harry Slater and X. R. Gill. The former members of the board who retired are J. Ray Stebbins, John L. Shakley, J. W. Swindler, J. W. Sloan and I. F. Crow. Mr. Stebbins is the son of the late Grant C. Stebbins, who founded the Gladys-Belle company, and Messrs. Shakley and Swindler are officials of the Frick-Reid Supply Co. Mr. Sloan is chairman of the board of the International Supply Co.

The new directorate includes two names exceptionally well known in oildom, Mr. Doan and Mr. Brewer. Murray M. Doan has spent a lifetime in the petroleum industry, and is now a producer and capitalist. Mr. Brewer is president of the First National Bank of that city. William H. Foster is president of the General Fireproofing Co. of Youngstown, Ohio; and Mr. Slater is assistant to the president of the Union Trust Co. of Detroit, Mich.

In his annual report to the stockholders, Mr. Green advises that last year the net operating profits of the Gladys-Belle company were $305,814.38, exclusive of the cash received from the sale of an interest in a lease in the Little River Field. This profit is before allowances were made for depreciation, depletion and Federal taxes.

A statement made indicates that plans are under way for the building up of the company, but they have not matured sufficiently to warrant discussion at present.

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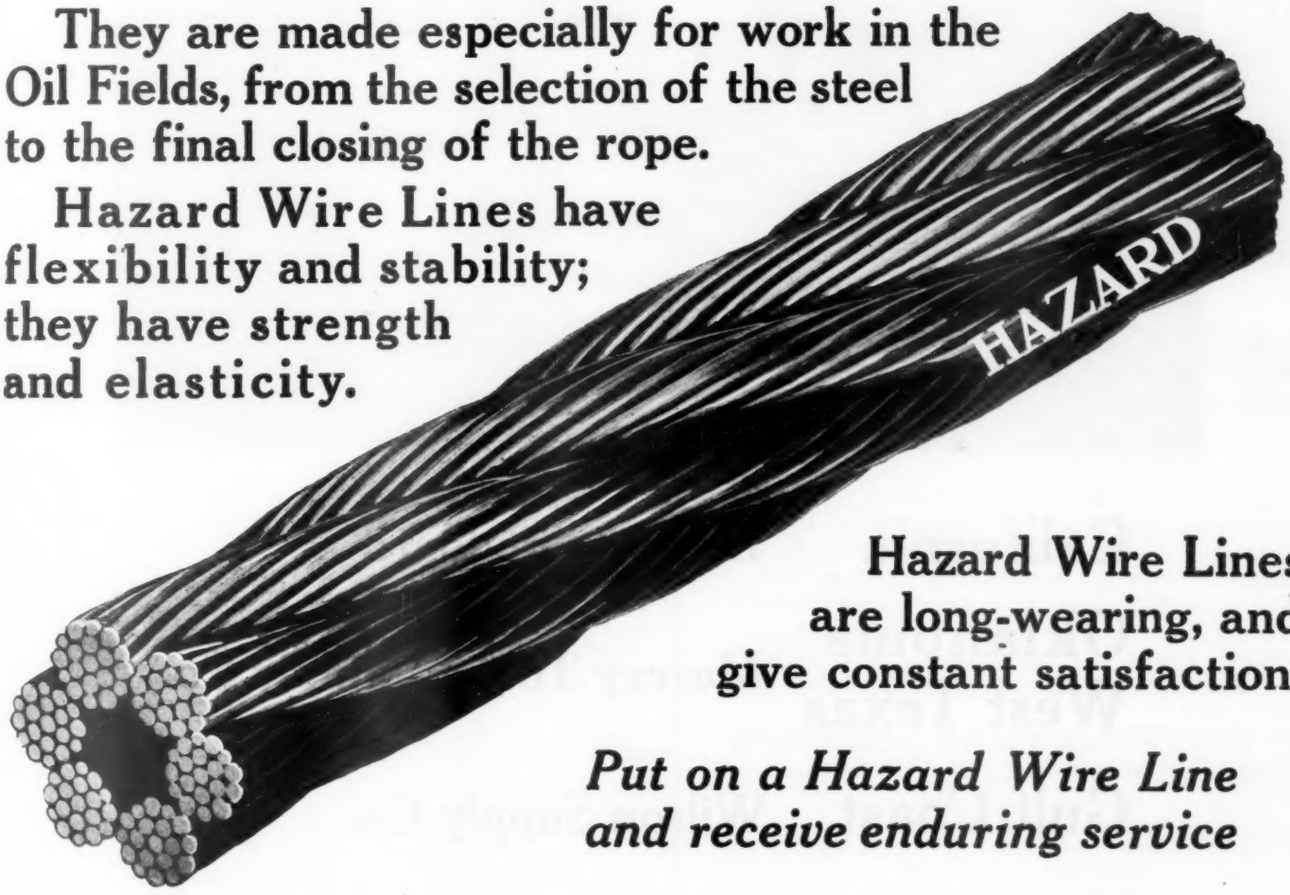

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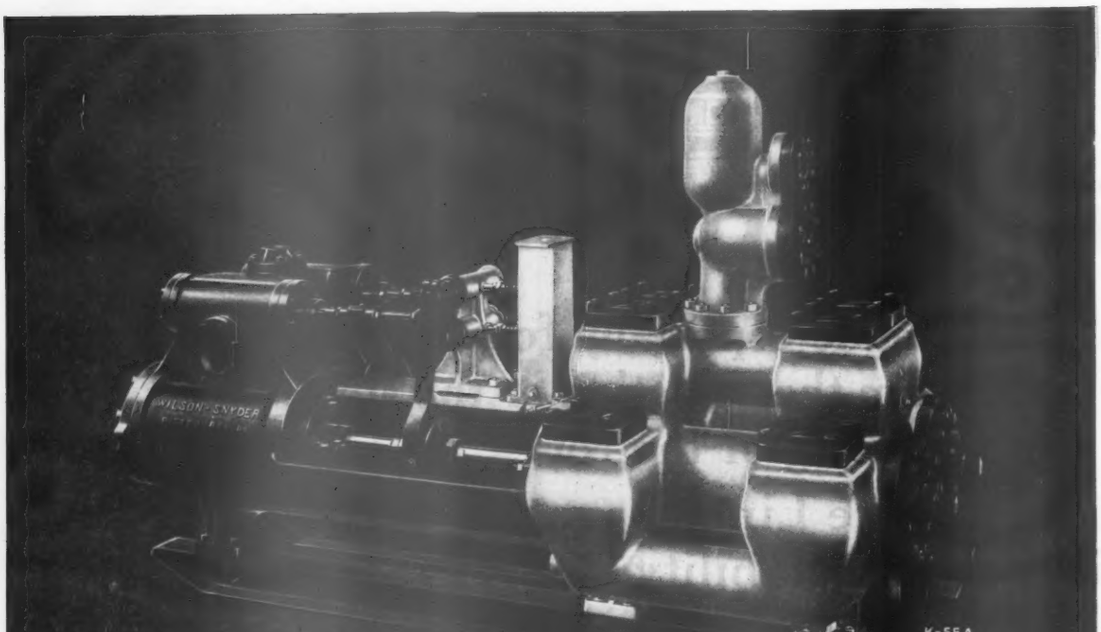

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EASTERN FIELDS

(Continued from Page 63)

Berea grit at a test on the William Gilenwater farm.

In Center district, Gilmer County, the Carnegie Natural Gas Co. drilled down to the Big Injun sand its test on the Lloyd Westfall farm, getting a 25-bbl. producer in that formation. In the same district, the Steer Creek Oil Co.'s No. 3 on the C. D. Hollehon farm is a gasser in the Big Injun sand. In the same district, the Carnegie Natural Gas Co.'s test on the Charles Despard farm is dry in all sands.

In Sheridan district, Calhoun County, Martin F. Crowley has completed in the Big Injun sand No. 4 on the John and Mahala Buck farm. It is a gasser. In Union district, Tyler County, Knowlton & Co.'s test on the T. P. Williamson farm is dry in all sands.

Ritchie County

In Grant district, Ritchie County, D. French & Co. have completed in the Big Injun sand No. 3 on the A. C. Payne farm. It is good for 3,000,000 feet and is the best gas well completed in West Virginia in a number of months. In the same district, L. N. Rinehart is testing for oil in the Big Injun sand at his second test on the Wilson farm.

In Mannington district, Marion County, F. W. Bartlett has drilled his test on the John Haddox farm into the Fourth sand. It is a gasser. In Fairmont district, the Owens Bottle & Machine Co.'s second test on the Merrifield-Freeland farm is a duster in the Fifth sand.

The United Fuel Gas Co.'s test on the Bias-Estle farm, in Grant district, Cabell County, is a light gasser. In Barboursville district, same county, J. W. Crotte has completed a test on his own farm. It is a duster in all sands.

Starting and Drilling Tests

In Hackers Creek district, Lewis County, the Jane Lew Gas Co. is drilling a test on the S. R. Propet farm. In Murphy district, Ritchie County, the Maxon Oil & Gas Co. has started to drill No. 3 on the Eli M. Parks farm. In the same district, L. C. Huff & Co. are rigging up on the J. P. Stalnaker farm.

In Mannington district, Marion County, the Manufacturers Light & Heat Co. has made a location on the K. Brown farm. In Smithfield district, Godfrey L. Cabot has made locations on the W. T. Epling and F. M. Perot farms. In Washington district, Jackson County, the Producers Oil & Gas Co. is drilling at 800 feet on the Kenna Skees farm.

McIntosh and others have a show of oil and gas on the Hays-Stalnaker farm, in Lee district, Calhoun County. In Otter district, Braxton County, the United Fuel Gas Co. has made a location on the C. F. and D. S. Engle farms. In DeKalb district, Gilmer County, Blaine Engle and others are skidding the rig on the Maria Davis heirs' farm. In Center district, Calhoun County, W. H. Bickel has started to drill on the Morris-Marshall farm.

In Battelle district, Monongalia County, the Clovis Oil & Gas Co. has made a location on the Fredrick Hennen farm. In Fairmount district, Marion County, the Owens Bottle & Machine Co. has a rig up on the Scott Arnett farm. In Church district, Wetzel County, the Freeland Oil & Gas Co. is drilling at 1,000 feet on the T. L. Freeland farm. In Liberty district, Marshall County, the Denver Oil & Gas Co. has had a rig up for several months on the Campbell heirs' farm. In Jefferson district, Lincoln County, the Russell Gas Co. has started to drill on the James Cooper farm. In Meade district, Tyler County, the American Oil Co. has made a location on the Henry Fish farm.

Calhoun County

In Lee district, Calhoun County, the Hope Natural Gas Co. is building a rig on the Altizer farm. In Sheridan district, Godfrey L. Cabot has started to drill on the S. J. Ferrell farm. In Otter district, Braxton County, the United Gas Co. has made a location on the D. S. Engle farm. In Center district, Gilmer County, W. H. Bickel is rigging up on the Morris Marshall farm.

In Hackers Creek district, Lewis County, the J. H. Anglin Oil & Gas Co. is hauling tools to a location on the E. M. Fleming farm. In DeKalb district, Gilmer County, S. G. Roberts is starting on the Viola Beall farm.

CANADIAN FIELDS

(Continued from Page 53)

LSD 11, Section 13-20-3w5, is drilling at 4,737 feet. Foothills Oil & Gas Co.'s No. 1, SW Section 26-20-3w5, is at 3,498 feet and cutting drill pipe. Foothills No. 2, LSD 8, Section 1-20-3w5, is at 1,980 feet and drilling. Home Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, is at 3,658 feet and after cementing off a caving is waiting for cement to set. Home Oil Co.'s No. 3, same LSD, is at 152 feet and drilling.

Illinois-Alberta Oil & Refining Co.'s No. 1, LSD 14, Section 12-20-3w5, for the week ending February 25 reported a crude naphtha production of 704.4 bbls., around 100½ bbls. a day, and a slight increase over previous production. Illinois-Alberta No. 2, same LSD, is drilling around 1,650 feet.

The three recent deep completions in the Turner Valley Field add materially to the potential crude naphtha production, though only the McLeod No. 1 is at present in actual production. The latest production figures for the Turner Valley Field are as follows:

Crude Naphtha Production

	Bbls.
Royalite Oil Co., Nos. 1 and 2	8
McLeod Oil Co., No. 1	135
McLeod, No. 2	40
Illinois-Alberta, No. 1	100
Royalite, No. 7	99
Vulcan Oils, No. 1	110
Royalite, No. 4	626
Total	1,118

Light Crude Production

Okalta Oils, No. 2	10
Canada Southern, No. 1	15
Home Oil Co., No. 1	40
McLeod, No. 3	29
New McDougall-Segur, No. 1	33
New McDougall-Segur, No. 2	39
Dalhousie, No. 5	65
Royalite, No. 10	30
Total	261

Potential Naphtha Producers

Spooner Oils, No. 1	125
Dalhousie, No. 1	250
Total	375

The figures give an indicated production, actual, and potential, of 1,854 bbls. Of the wells listed as actually productive, Vulcan No. 1 is occasionally frozen but averages the production indicated; and Royalite No. 10 is being tubed and may make better than the figure indicated.

In the north end of the Turner Valley Field, Stockmen Oils' No. 1, LSD 1-2, Section 27-20-3w5, has finished pulling the 10-inch and 12½-inch casing and is cementing the 4½-inch string above the gas flow at 1,760 feet.

Calmont Oils, LSD No. 2, Section 1-20-3w5, is shut down at 5,191 feet making repairs to the engine.

British Dominion Oil Development Corp., LSD 4, Section 5-20-2w5, is reported at 6,500 feet with the open hole caving slightly.

Dolomite-Foothills

A meeting of shareholders of Dolomite Oils, Ltd., held at Calgary recently formally ratified the agreement under which the Foothills Oil & Gas Co. is taking over the Dolomite assets and completing the Dolomite Oils' test in LSD 8, Section 1-20-3w5. The Foothills stock received in consideration of the transfer will be distributed among the Dolomite shareholders who will receive one share of Foothills for 16 of Dolomite. Dolomite Oils, Ltd., was capitalized at $750,000 of which 250,000 $1 par shares were offered, but not fully subscribed.

Okalta Oils' No. 1, LSD 1, Section 1-20-3w5, is reported drilling in the lower Fernie shales at 4,680 feet. Lime bands alternating with the shale formation indicate that the drill is approaching the deep lime, which should be reached around 5,000 feet.

New Valley Oil Co., LSD 4, Section 6-21-2w5, is reported resuming drilling at 2,080 feet, after hauling a coal supply from the Chickadee mine at Priddis. The

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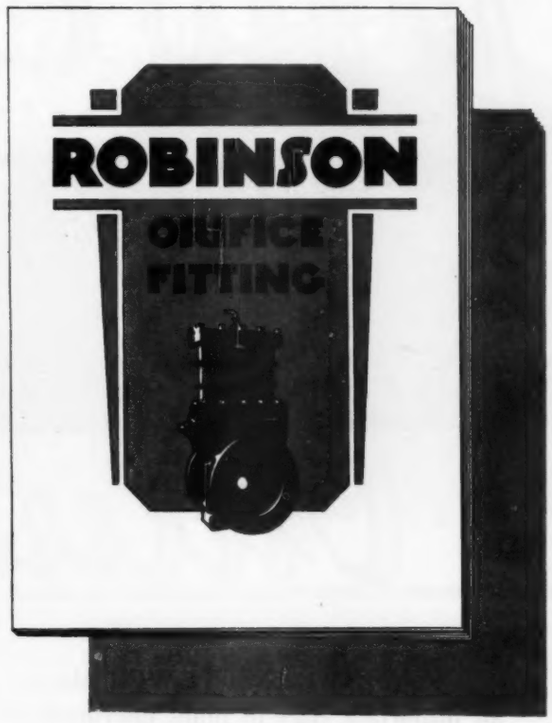

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test has been shut down for some months owing to difficulty in securing fuel.

Vulcan Oils' No. 2, LSD 11, Section 13-20-3w5, is reported drilling at 4,825 feet. Seneca Oils, LSD 1, Section 34-20-3w5, is at 3,645 feet and drilling.

Mayland Oils, LSD 10, Section 17-19-2w5, has spudded in, the Union Drilling Co. having the contract. Regent Oil Co., LSD 16, Section 1-20-3w5, is cleaning out hole preparatory to resuming drilling at 2,475 feet.

In the Highwood district, Imperial Oil, Ltd., Highwood No. 1, LSD 3, Section 36-18-3w5, is straightening crooked hole at 3,624 feet.

Moose Mountain

In the Moose Mountain district, west of Calgary, Signal Hill Oil Co.'s No. 2, LSD 9, Section 34-23-5w5, is at 1,844 feet. The test ran into some caving at 1,800 feet, which was cemented off. Another caving was encountered at 1,838 feet, and 8-inch casing was ordered from Montana. Drilling is being continued carefully, and the casing will be run as soon as it arrives. Signal Hill No. 2 is testing the same structure which, at the time of the Calgary boom, was found productive in the Moose Mountain Oil Co. well. The Moose Mountain well got what looked like a commercial production of around 37 gravity crude at comparatively shallow depth; but the well seems to have been badly handled, and was ultimately lost. The Moose Mountain company, however kept its leases in good standing; and the Signal Hill Oil Co. is now carrying on development on the original Moose Mountain acreage. Several oil showings have been encountered, and production is looked for at comparatively shallow depth. On the Morley Indian reserve, an extension of the Moose Mountain Field, Wabash Oils, Ltd., is reported drilling around 900 feet.

Skiff Field

In the Skiff Field, southern Alberta, Devenish Petroleum's No. 1, LSD 5, Section 27-5-14w4, is reported pumping intermittently, and making around 10 bbls. an hour or better. The production seems to be increasing slightly. In addition to the 10-well drilling program of the Imperial-Devenish interests, several independent companies at Calgary are planning to start development on the Skiff structure this spring. The Model Oil Co. of Calgary has spotted a test in Section 32-6-14w4. Illinois-Alberta Oil & Refining Co. of Calgary, which has a deep lime producer in the Turner Valley Field and is drilling a second deep test there, last year secured acreage near the Skiff well; and will, it is understood, start its test this spring. United Oils, Ltd., of Calgary, is reported planning a test. Devenish Petroleum, Ltd., has a big acreage under lease, and it is reported that a number of companies and syndicates are negotiating for drilling rights on the Devenish holdings.

On the Beaver Dome, near the international boundary, Madison Oils, Ltd., of Calgary, has made a location in LSD 8, Section 24-2-11w4. Union Drilling Co. has the contract for a cable tool test for the Madison Oils, and is reported moving an outfit from Coutts; the test is expected to spud in before the end of March. The Madison company is providing the equipment, and has a supply of 12½-inch casing at Coutts. The location is close to the old Beaver well, drilled about 1915, and which encountered gas and traces of oil and is thought to have mudded off a commercial production.

Warner District

In the Warner district, Gas Production & Transportation, Ltd., NE, Section 21-4-18w4, is reported to have resumed drilling below 3,200 feet, after a few days' shutdown due to water troubles and caving. The water has been successfully shut off. At this depth the test is within about 300 feet of the potential producing horizon, and should be completed before the end of the month. The company handling this test is a subsidiary of the Canadian Western Natural Gas Co. of Calgary, and it is understood that arrangements have been made between the latter company and California interests for an intensive development program if production is secured.

West of Coutts, Ko-Top Oils Co., of Calgary has made a location in SE, Section 2-1-17w4. The location is right on the international boundary line, and 7½ miles west of Coutts. This well will test the Red Coulee structure, at one time thought to lie on a northwesterly extension of the Kevin-Sunburst Field. Some seven years ago Imperial Oil, Ltd., drilled a test on the Red Coulee structure, the location being in LSD 6, Section 5-1-16w4. The test was abandoned at 2,706 feet. A fair show of oil was met, but failed to develop commercial production; it is understood the well, when deepened, developed water troubles. The Ko-Top location is 2½ miles west of the Imperial-Red Coulee, and the test was spotted by Dr. T. B. Williams, geologist for the company. Ko-Top Oils Co., Ltd., is capitalized at $500,000 and will handle its operations from Lethbridge. The officers are: President and managing director, W. J. Douglas, Calgary; vice president, A. F. Cook, Calgary; secretary-treasurer, Charles E. Meadows, Lethbridge; director, Steve Williams, Milo. A standard rig will be used, operating on fuel oil. The company is planning to drill two tests. It has 405 acres on the Red Coulee structure, and a 20-acre lease in the Turner Valley Field close to production. The approximate depth of the Madison limestone is 2,700 feet, and production is expected in the Ellis sand, or at the Madison-Ellis contact.

Pincher Creek

In the Pincher Creek Field, southwestern Alberta, Alberta Gas & Fuel Co.'s No. 1 Doherty, Section 34-2-29w4, is reported shut down. Quicksand was struck at 90 feet and a drive head had to be secured to force the casing through. A warehouse for tools and casing is being built near the storage tank at Hillspring.

Following the reported strike in the Sunburst Oil & Refining Co.'s Flat Coulee test in the Sweetgrass Hills some 2 miles south of the Alberta boundary, considerable territory has been leased on the Canadian side. The well is being finished at the Madison-Ellis contact, and is considered a commercial producer from two horizons, the main production coming from a 27-foot member of the Ellis. No. 2 is being located a little distance north of No. 1 and down the flank of the structure. No. 1 is claimed to be right on the top of the structure, and No. 2 is expected to miss the gas and possibly get a flowing well.

In the foothills belt of Alberta, work is being started on the Rickert structure in the Rocky Mountain Forest Reserve. Paramount Oils, Ltd., of Calgary, has a derrick up in LSD 2, Section 29-19-4w5, and is reported installing equipment. Evorne Oils, Ltd., has spotted a test in LSD 4, Section 34-19-4w5, northwest of the Paramount, and is hauling timber for camp buildings and derrick. Duthill Oils, Ltd., has a location in LSD 13, Section 28-19-4w5, and is working on derrick. The structure is west of the Turner Valley and was located originally by Julius Rickert, whose theory is that the main body of oil in the Turner Valley is migrating from the west from the direction of the forest reserve.

In the Wild Cat Hills district, 7 miles west of Cochrane, the Canadian Exploration Co., of Denver, Colo., will drill a test this year on acreage owned by the Canadian Western Natural Gas, Light, Heat & Power Co., of Calgary. The agreement calls for a test to be started before July 15.

Test Near Suffield

An important test is being started this spring 14 miles northeast of Suffield, Alberta, by the Ontario-Alberta Oil Development Co., Ltd., of Toronto. The company has located its No. 1 test in Section 33-16-8w4. The Ontario-Alberta Oil Development Co. leased its acreage in 1926, its holdings including 16,000 acres in Townships 16 and 17, Range 8w4. Since then geological investigations have been carried on under the direction of H. B. Pearson of Calgary, who will direct the drilling operations and who

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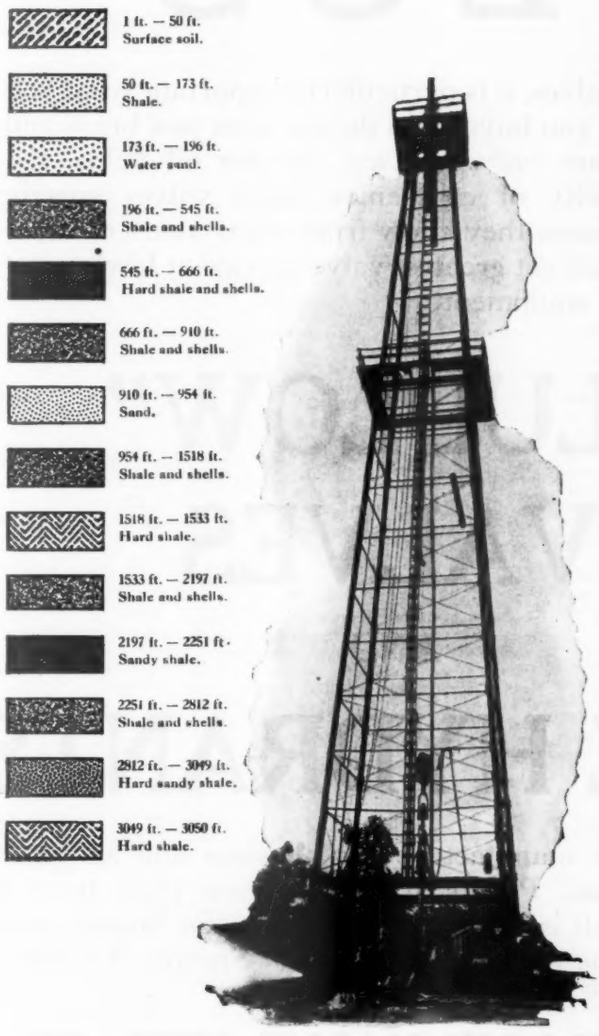

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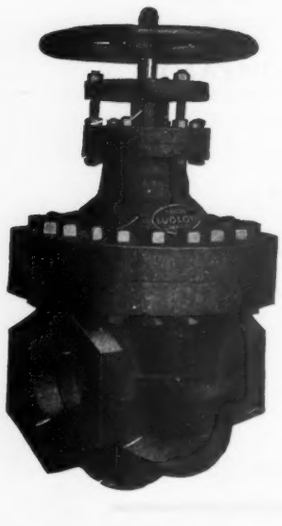

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made the location. A standard cable tool outfit for the test is now at Redcliffe and will be moved to the location as soon as the roads are in shape. The officers of the company include E. Marks, president; and Nathan Phillips, secretary-treasurer, both of Toronto.

In the Turner Valley Field, the derrick at Home Oil Co.'s No. 3 LSD 14, Section 20-19-2w5, caught fire on March 7 and was completely destroyed. The test was down 512 feet. It will be again rigged up as soon as possible.

Viking Gas Field

In the Viking gas field, east central Alberta, P. M. Chandler, president of the International Utilities Corp., has announced in an official statement that the Hudson's Bay-Marland Oil Co. test in the Viking Field will start drilling by June 1. The structure which has been approved by Marland geologists is situated in the center of the Viking gas field, from which Northwestern Utilities, Ltd., a subsidiary of the International Utilities Corp., now supplies gas to Edmonton. In the event of oil being obtained by deep drilling, an oil production company is to be formed and owned jointly by the Hudson's Bay-Marland Oil Co. and the International Utilities Corp.

SOUTHWEST WILDCATS

(Continued from Page 46)

to spud in March 3; No. 1-A V. Guerra, Porcion 68, Block 92, is a location 150 feet to south and east lines. Kusch Exploration Co.'s No. 1 Frank Doyno and others, Porcion 75, Block 13, is drilling in rock at 650 feet. Clark & Woodruff's No. 1 Kelsey, Porcions 75, 76 and 77, is at 568 feet fishing for bailer. J. E. Harston's No. 1 H. Guerra, Survey 43, is shut down at 1,120 feet. Deckle & McCarley's No. 1 Garcia, Survey 918, located 150 to south and west lines, is drilling at 1,680 feet.

Zapata County

Hill, Reiser & Weed's No. 1 H. Rodriguez, Block 1, R. V. Hill Subdivision, Villa Grant, located 870 feet to northwest lines and 450 feet to northeast lines, is location (location has been changed).

Bexar County

Allen Burnam's No. 1 Ward, A. A. Gardiner Survey, southwest of Martinez, is shut down at 1,000 feet to repair pump. Larsen-Walsh and others' No. 1 Oppenheimer, William Miller Survey No. 180, located 330 feet to south line of survey and farm and 330 feet east of center of survey, is driling at 1,100 feet, with Navarro from 1,070 to 1,110 feet with odor of oil. C. J. LeCompte's No. 2 Diaz, Survey 32, Block 4,283, located 450 feet north of No 1, is shut down at 72 feet on rock with surface casing set.

Bastrop County

McMurtray's No. 1 B. L. Duran, L. Flint Survey, located 150 feet to northwest lines and 900 feet to southwest lines and 2 miles west of Red Rock, is coring below chalk at 2,780 feet. Noack & Laning's No. 1 Roemer, Isaac Casner League, shut down at 1,935 feet. B. W. Owens' No. 1 Ed Jones, 150 feet to north and east lines of 34.5-acre tract, rigged up.

Blanco County

C. W. Bates' No. 1 Herman Massey, Henry Manton Survey, 920 feet to north line and 660 feet to east line of survey and 8 miles east of Blanco City, is drilling at 115 feet. Robert A. Rodson's No. 1 Glasscock, Survey 50, located 150 feet to CEL, shut down at 450 feet for repairs; driling in hard formation.

Caldwell County

Lu-Tex Oil Co.'s No. 1 Wilson, A. Floyd Survey, 2,320 feet to east line and 200 feet to south line, is shut down. Detex Oil Co.'s No. 1 Hardeman, 4 miles north of Luling, is shut down at 3,075 feet. J. E. Latson's No. 1 Gomillion, J. Burleson Survey, is a location in northwest corner. H. C. Ratcliffe's No. 1 Briscoe, James Hindes Survey, center and northeast of Luling, is standing; No. 1 J L. New, same survey, located 150 feet to west line and 600 feet to south line, is shut down at 2,914 feet. H. R. Smith's No. 1 Callihan, D. Cooper Survey, is a location in center of survey. Louis P. Schawe has derrick up and is moving in rig for test.

DeWitt County

Durbing Oil Co.'s No. 1 Gohmert, G. W. Brooks League, 175 feet to north line and 300 feet to east line, is drilling at 2,570 feet. Empire Southern Oil Co.'s No. 2 Smith, Survey 3 and located three-quarters of a mile from No. 1, is shut down at 3,150 feet. H. T. Roe's No. 1 Lienhard, D. J. Bibb Survey, southwest corner, is shut down at 950 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 2 City National Bank, Survey 654, is a location a few feet from No. 1.

Edwards County

Devil's River Oil Co. is moving in rig for deep test in center E half of Section 164, C.C.S.D.&R.G.N.G. Survey; No. 2 Turney, same survey, Section 167, is standing at 440 feet.

Frio County

Karnes and others' No. 1 J. J. Little is shut down at 607 feet. F. A. Lain's No. 1 Edwards, Hooper & Wade Survey, 920 feet to CNL, at 1,250 feet is preparing to resume drilling. P. A. Neilan's No. 2 Blackaller, James Gouley Survey, is shut down at 2,950 feet.

Fayette County

National Oil Co.'s No. 1 J. C. Melcher, S. M. Williams League No. 1, located 300 feet to north and east lines of farm, has completed rigging up. Williams & Phalon's No. 1 Cervvenka, F.C.S.L., Block 97, has derrick up and rig on the ground.

Goliad County

C. W. Simpson's No. 1 Ideus, W. H. Pendleton Survey, 156 feet to north line and 540 feet to west line of lease, is shut down at 2,323 feet.

Gonzales County

W. D. Flynn's No. 1 Wilhausen, S. Bateman Survey, east central part of the lense, is drilling at 1,400 feet. Gonza Petroleum Co.'s No. 2 Elder, Block 11, is shut down at 1,250 feet; No. 1 Sinclair is shut down at 1,200 feet. L. L. Jones' No. 1 Campbell, Moore & Bridges Survey, southwest corner, is shut down at 1,980 feet. W. G. Malone's No. 1 Mrs. D. G. Staton is a location, and a water well is being drilled in preparation to the test. L. P. Unkel's No. 3 Johns, C. H. Jaeger Survey, in the shallow Slayden Field, is drilling in gumbo at 1,000 feet.

Guadalupe County

O. W. Killam's No. 1 J. W. Calvert, Fulcher Survey, 110 feet to north line and 1,250 feet to west line and 6 miles east of Seguin, topped chalk at 1,600 feet, the Edwards at 1,970 feet and is drilling in Edwards at 2,150 feet dry. J. M. Rentz's No. 1 J. Siligman and J. Freeman, Gustavus Chotwell Survey, 1,100 feet to southwest lines of farm and survey and 1,130 feet from southeast lines of farm and 6 miles west of Prairie Lea, has spudded in and set surface casing.

Hays County

Orren Estess-H. J. Moore & King's No. 1 C. N. Sledge, Hunton & Jones Survey, 285 feet to northwest lines of farm and 310 feet from southwest corner of Herzog 10-acre tract, has derrick up and rig on ground. J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, at 2,189 feet is preparing to make test.

Jackson County

J. B. Douglas' No. 1 C. O. Lowrance, 12 miles northwest of Edna, has completed rigging up and was to spud in March 5.

Jim Wells County

Cushing Oil & Gas Co.'s No. 1 M. Perez, La Tinaja Survey, in de la Lara grant, 600 feet to east and north lines of survey and 6 miles west of Alice, is rigging up, derrick completed.

Karnes County

Reynosa Oil Corp.'s No. 2 Butler, Block 43, located 1,000 feet south of No. 1, is fishing at 2,007 feet.

Kerr County

Walker-Van Duyn's No. 1 Barfield, B. B. Peck Survey, 4,700 feet to north line and 450 feet to east line, is underreaming at 2,010 feet.

Live Oak County

J. A. Harper and others' No. 2 Nichols, 300 feet east of No. 1, at 1,165 feet set casing, had oil showing, on Lewis tester fluid rose 500 feet, mostly oil. War. Wood Hunt's No. 1 McNeil, Jane Curry Survey, 3,000 feet to northwest lines and 4,000 feet to northeast corner, at 2,050 feet set 500 feet of 10-inch surface casing and now ready to resume drilling.

Medina County

Pat M. Armstrong's No. 1 Mangold, Survey 62, located 200 feet to south and east lines of farm, at 800 feet approximate depth has oil and gas showing under rock. Chacon Oil Co.'s No. 2 Jungman, Survey 31, located 1,500 feet to east line and 500 feet to south line, is shut down at 1,675 feet. Medina Oil Co.'s No. 1 Taylor, Survey 135, is shut down at 1,230 feet.

Maverick County

Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, center, at 4,370 feet has crevice and is losing returns. Ryeade Oil Corp.'s No. 1 Chittim, Section 129, Block 7, is shut down at 4,295 feet for water; No. 2 Chittim, Section 158, Block 7, is drilling at 4,050 feet.

McMullen County

Houston Gulf Gas Co.'s No. 1 Lark, O'Boyle Survey, is shut down temporarily at 1,500 feet.

Refugio County

George Williams, trustee, No. 1 Terrell, Martin Powers Survey, 6 miles southwest of Refugio, is to test.

San Patricio County

R. D. Kelly is making location for test 2 miles southeast of Odem. Ed Leach's No. 2 Collins, Edward McGloin Survey, SE Section 39 and a few miles northwest of Mathis, at 2,368 feet has set and cemented casing and will drill in this week. National Oil Co.'s No. 1 J. E. Sullivan, J. C. McMullen Survey, 500 feet to southwest corner, at 1,805 feet has put in new boiler and supply of fuel and is ready to resume drilling. George B. Pickett's No. 1 Whitworth, NW NW Section 60, is drilling in hard rock at 2,700 feet; No. 1 Garrett is shut down at 3,030 feet. John Sigmund's No. 10 Robinson, 60 feet south of No. 9, is in pink gumbo and formations are running like No. 9.

Travis County

Cranfil & Reynolds and Smith & Clark's No. 1 Otto Schreiver, J. B. Hurd Survey, 1,120 feet to northwest line and 150 feet to northeast lines, is drilling at 325 feet. T. P. Garrett's No. 1 Rowe, R. Hornsby Survey, 900 feet to north and east lines and 8 miles east of Austin, is drilling at 1,000 feet in lime and hole is caving.

Uvalde County

Pure Oil Co.'s No. 1 J. D. Smythe, Survey 687, located 740 feet to north line and 146 feet east of southeast corner of Survey 20, at 1,676 feet is underreaming 6-inch at 1,425 feet.

Victoria County

J. J. Elam's No. 1 Vol Kutchka, 200 feet to CNL of Section 40, is shut down at 1,000 feet for drill stem. Humble Oil & Refining Co.'s No. 1 Jaeggli is drilling at 595 feet. R. M. Talbott's No. 1 Reeves, 2,000 feet to west line of Reeves estate, is shut down at 1,825 feet.

Val Verde County

T. W. Callahan and associates' No. 1 National Cattle Loan Co., NW Section 47, Block Y, center, has contract let. East Del Rio Oil Co.'s No. 1 Russell, Section 183, is shut down at 3,210 feet in brown lime. Independent Operator's No. 1 Whitehead, SE SE Section 30, Block 4, I.&G.N. Survey, is preparing to resume drilling at 3,900 feet. Magnolia Petroleum Co.'s No. 1 Whitehead, Section 81, is drilling at 6,330 feet. O. O. Owens' No. 1 Mills, Section 128, Block 1, is shut down at 4,210 feet. W. V. Traves' No. 1 Wilson, Section 115, Block E, is shut down at 905 feet.

CALIFORNIA FIELDS

(Continued from Page 56)

rather comprehensive drilling program on several of its various properties in this field and will more than likely finish three or four new wells within the next 15 days. The present drilling program of the Honolulu Consolidated is the result of stringent lease obligations rather than to any special desire to engage in any extensive development work at the present time. The General Petroleum, Modoc Oil Co. and Signal Gasoline Co. are all making good progress in their respecitve wells in the Granite Canyon section of the Mount Poso Field, located west of the Round Mountain district. The General Petroleum is down 1,765 feet in No. 9 Glide, the second well in Section 21-27-28 and No. 7 on the same property will be spudded in within a short time after completion of the former.

Northern California Wildcats

Leasing activities were rather brisk in the San Joaquin Valley during the past week or 10 days, operators tying up approximately 15,000 acres during this period. The Marland Oil Co. acquired a little better than 4,000 acres in the area located between Arvin and Weed Patch and, according to lease requirements, drilling must be actually under way within 90 days. The Marland acquired these drilling rights as a result of a series of lease agreements with a number of land owners negotiated a week or 10 days ago. The test to be drilled by the Marland will probably be located in Section 32-21-28 and this additional work will add interest to present prospecting operations at Comanche Point, Greenfield and Edison, all located in the extreme southern part of the San Joaquin Basin. The General Petroleum increased its holdings of potential oil land last week by leasing 5,472 acres in the territory in and around McFarland. The 85 leases recorded by the General Petroleum are on a one-eighth royalty basis and do not call for immediate work. Practically all of them are five-year contracts and consequently the company will probably not undertake any immediate work around McFarland.

The Union is making good progress with the 6-inch line started last week from its Kern River refinery to the recently discovered field at Fruitvale and it will probably be in operation within the next 15 days. The Pacific Eastern, discoverer of both the Fruitvale and Union Avenue areas, does not contemplate any additional work in the former section but will probably be obliged to drill several tests in the latter district, especially if one of the two tests now under way is finished as a successful commercial producer. J. E. O'Donnell is making preparations to drill a new well in the Fruitvale district not far from the Pacific Eastern's discovery and this project, together with another wildcat which he is drilling in the Greenfield area south of Bakersfield, will be watched very closely. The Brownmoor Oil Co. also contemplates the drilling of a new well in the Fruitvale area as this company has a lease immediately adjoining the holdings of the Pacific Eastern. The Belridge Oil Co. may also undertake some new work in the Fruitvale Field within the next 30 days, although no definite move has yet been made. The Pacific Eastern's initial discovery at Fruitvale, incidentally, is still holding up in good shape, the production averaged 180 bbls. per day during the past week.

The Richfield has resumed work on the Semitropic Oil Co.'s well, located on Semitropic Ridge northwest of Fruitvale, and this district will bear watching during the course of the next several months as it is in a direct line with Union Avenue and Fruitvale. The Milham Exploration Co. finished its third gas well in the Buttonwillow area of Kern County last week and while it was not as large as the two immediate predecessors, it is a commercial producer capable of making 500,000 feet of dry nonpetroleum gas per day. It has been shut in and preparations are being made to drill a fourth well in Section 5-28-23. The operations of the Milham Exploration Co. in this district are of special significance in view of the fact that a natural gas line will ultimately be laid from this area northward to San Francisco as soon as commercial production is assured.

Tentative arrangements have been made to construct a natural gas line from Buttonwillow to San Francisco and it is the general consensus of opinion that this will become a reality before the current year draws to a close. The Southern California Gas Co. expects to test out its Buttonwillow gas well some time within the next 10 days and the

outcome will be watched with interest. W. W. Stabler is making good footage in his wildcat at Comanche Point in southern Kern County and this well, which is located in the western extremity of the Tejon ranch, is the fourth attempt to develop production in that immediate area. The present well which Stabler is drilling is located in Section 23-32-29, not very far away from the old Globe well which was abandoned at 2,258 feet. It is approximately 6 miles due south of Arvin and while previous attempts to develop production have been unsuccessful the outcome of this well will be watched with interest.

Southern California Wildcats

One of the most interesting developments in southern California during the past week was the location of a new well to be drilled by A. D. Kneuper in the Seal Beach area, the exact location being near the Edison Electric Co.'s plant not far from the city limits of Seal Beach. George F. Getty was down 2,900 feet a few days ago in his Seal Beach wildcat and both of these tests should be watched closely during the next several months, especially in view of the fact that J. B. Dabney and the Seal Beach Oil Co. both encountered considerable gas during the course of work in this district several years ago. One of these wells was particularly threatening for some time and did actually stage a short blowout but water trouble prevented a successful test of any kind. The Olympic Refining Co. has reached a depth of 4,650 feet in its wildcat at Sunset Beach and if normal footage is made during the next two weeks this well should begin picking up oil and gas showings if commercial production is to be developed. The Associated ran into mechanical trouble in its wildcat at Rivera and drilling will naturally be suspended pending recovery. The Shell will probably spud in its second wildcat on the Mission lease at San Fernando within the next week or 10 days. The World Petroleum is reported to have consummated negotiations for the acquisition of the Hurst Oil Co.'s wildcat at Inglewood and a resumption of work is expected in the near future. The Petroleum Securities should begin picking up some favorable indications in its No. 1 Connolly, a wildcat in the Potrero Field, if it expects to secure production as it was down 4,700 feet a few days ago. This well is located about a mile north of the Associated's discovery, No. 1 Cypress.

SOUTHWEST TEXAS FIELDS

(Continued from Page 46)

gasser gauging 4,000,000 feet with 165 pounds rock pressure.

New Locations

Houston Gulf Gas Co.'s No. 1 Virginia Hallman, in Refugio County, is laying water and gas lines to location and preparing to spud in.

Houston Gulf Gas Co 's No. 2 Waelder, San Patricio County wildcat, is rigging up. Location near No. 1 recently abandoned.

Houston Gulf Gas Co.'s No. 1 J. M. Bennett, offsetting Houston oil well on the Steel tract, San Patricio County, is setting machinery.

The Texas Company's No. 8 Clingensmith, Damon Survey in the Dale Field, in Caldwell County, is location 150 feet to south and west lines.

Magnolia Petroleum Co.'s No. 3 Benavides, corner Blocks 144, 145, 194 and 195, Cole gas field, Duval County, is location; No. 2 Benavides, corner of Blocks 146, 147, 194 and 195, is location in the same field; No. 3 Benavides, Block 2, O'Hearn & Seacord Subdivision in the Cole Field in Duval County, has derrick up 200 feet to southwest lines and 700 feet to northwest lines.

Newton Drilling Co.'s No. 1 Bruni, Block 64, Albercas Field, 950 feet to south line and 450 feet to west line, has been spudded in and is drilling at 40 feet.

Cole Petroleum Co.'s No. 54 Benavides, Survey 412, Block 5, Webb County, 632 feet to west line and 385 feet to north line, has derrick up; No. 55 Benavides, Survey 412, Block 4, same county, has derrick up 160 feet to south and west lines of block.

Magnolia Petroleum Co.'s No. 36 Merchants State Bank, Survey 415, Randado Field in Jim Hogg County, is location.

Lightfoot and others' No. 1 Palacious, Survey 287, Block 13, in Jim Hogg County, is moving on.

Robert Driscoll's No. 11 fee, Survey 448, Driscoll Field in Duval County, has been spudded in and is drilling at 300 feet.

Edward St. Albans' No. 1 Hyatt, Survey 25, Sweeden farm tract, north of the Driscoll gas field in Duval County, has derrick up at 450 feet to south line and 150 feet to west line.

Cole Gas Field—Duval

Schott & Tafel's No. 1 Bruni, Survey 585, located 3,000 feet to NW cor. and 150 feet to west line, has been spudded in. Houston Oil Co.'s (Humble) No. 2 Juan V. Cuellar, Share 1, Cuellar grant, located 474 feet to southwest lines and 2,258 feet to northwest lines, at 1,202 feet, is shut down in sticky shale. Houston Oil Co.'s (Sun) No. B-4 Benavides, Survey 12, Block 13, located 660 feet to north and east lines, has sand at 1,693-99 feet and set casing at 1,690 feet. Magnolia Petroleum Co.'s No. 2 Benavides, Arispe grant, Blocks 146, 147, 194, and 195, is location; No. 3 Benavides, same grant, is location at corners of Blocks 144, 145, 196 and 197; No. 3 Benavides, O'Hern & Seacord Subdivision, Block 2, is location.

Humble—Reiter-Foster Field

Humble Oil & Refining Co.'s No. 7 Kohler, Survey 165, located 200 feet to north and west lines, in sand at 2,793-2,807 feet, casing set at 2,685 feet, is bailing, showing oil and salt water.

Driscoll Field

Robert Driscoll's No. 9 fee, Survey 23, located 1,875 feet to west line and 2,850 feet to south line, at total depth of 8,005 feet, bailed and first came in a large gasser, estimated at 70,000,000 feet through five-eighths-inch choke and later began spraying oil, and after 30 minutes began showing salt water, coming from an uncased level above the sand, casing being set at 2,961 feet, and sand at 2,957-67 feet, having tested salt water. Working on well.

Randado Field—Jim Hogg

Johnson and others No. 24 Palacious, Survey 291, Block 14, is location 150 feet to east line and 726 feet to north line. Lightfoot and others' No. 1 Palacious, Survey 287, Block 13, is location 150 feet to north and west lines.

Henne, Winch & Fariss Field

Edwards St. Albans' No. 9 Lopez, Share 1, Block 6, located 291 feet to east line and 180 feet to south line, is standing at 2,144 feet.

Alworth Field

Alworth-Stevens-Hild's No. 11 M. Garza, Survey 39, Block 10, is location 215 feet to northwest lines and 518 feet to southwest lines, elevation 501 feet.

Schott Field—Webb

Magnolia Petroleum Co.'s (Carnahan) No. 1 Garcia, Survey 53, location 200 feet to south line and 500 feet to east line, being deepened from 1,580 feet is down 1,985 feet.

Albercas Field

Newton Drilling Co.'s No. 1 Bruni, Block 64, Bruni Subdivision, located 910 feet to south line and 365 feet to west line, is rigging up.

Aviator or Bruni Tracts

Livingston and others' No. 1 Puig, Block 6, Edgington Subdivision, 150 feet to north and west lines, at 1,810 feet, is drilling after testing salt water at 1,745 feet.

Carolina—Texas Field

Houston Oil Co.'s No. 3 S. Benavides, Survey 683, located 350 feet to north line and 1,470 feet to east line, has completed rigging up at 3,014 feet to deepen and is waiting on orders.

Cole Gas Field No. 2

Cole Petroleum Co.'s No. 53 Benavides, Survey 412, Block 3, located 160 feet to south and east lines, at 2,328-34 feet, has sand and has set casing at 2,327 feet.

Mirando Valley—Zapata

William R. Jewell's No. 1 R. Hinnant, Survey 10, Block 4, located 150 feet to northeast and southeast lines, is moving on.

Luling Field—Caldwell

Pat M. Armstrong's No. 1 Hardeman, Miles G. Dykes Survey, located 150 feet to northwest and southwest lines of farm, is coring at 2,100 feet. Magnolia Petroleum Co.'s No. 8 F. M. Mercer is drilling at 2,165 feet.

Kingsville Field—Kleberg

Humble Oil & Refining Co.'s No. B-3 Dennett, Lot 19, Section 38, at 2,253-65 feet cored oil sand and has set casing at 2,253 feet to test; No. 5 Kleberg, Lot 8, Section 40, offset to No. 2 Flato on the northeast at 2,830-53 feet cored oil sand and set casing at 2,830 feet to test; No. 6 Kleberg, Lot 1, Section 40, at approximate depth of 2,240 feet, has set casing.

Oakville Gas Field

Simmons Oil Co.'s No. 1 Frank Church, 200 feet to south line and 600 feet west of NE cor. of farm and near Oakville, has set surface casing at 100 feet. Same company has six shallow gas wells in this field.

Saxet Field—Nueces

Alamo Drilling & Leasing Co.'s No. 1 Gallagher, Survey 158, located 1,215 feet to north line and 650 feet to east line, is shut down at 150 feet. Saxet Oil Co.'s No. 3 Weil, 250 feet south of S.A.U.G. tracks and 250 feet west of No. 1 well of Reed & LaPrelle, has set surface casing.

Refugio Gas Field—Refugio

Houston Oil Co.'s No. 1 Rooke is drilling at 3,000 feet; No. 6 Rooke is drilling at 3,000 feet; No. 11 W. J. J. Heard is setting casing at 3,290 feet. Houston Gulf Gas Co.'s No. 2 Shelly at 3,307 feet is waiting on casing; No. 5 W. Heard is drilling at 3,000 feet; No. 2 Ryals is drilling in at approximately 3,300 feet; No. 1 Vance missed the 3,300-foot sand and is shut down at 3,600 feet. Saxet Oil Co.'s No. A-5 Wilson Heard is moving in machinery.

White Point Gas Field—San Patricio

Alamo Drilling & Leasing Co.'s No. 1 Hunter has spudded in and setting casing at 350 feet. Saxet Oil Co.'s No. 1 Dennett is erecting derrick; No. 1 White Point Development Co. is drilling at 1,950 feet; No. 1 Hunter is building derrick.

West Gas Field—Zavala County

Tritex Oil Corp.'s (formerly J. D. Pundt) No. 2 West, Juan Fuentes Survey No. 43, located 366 feet to north line and 266 feet east of Uvalde-Batesville Highway, is moving in rig to start at once.

Houston Gas Line

Houston Pipe Line Co., subsidiary of the Houston Oil Co., has its second gas line from the Cole Field in Webb and Duval Counties to Houston nearly completed. The line is being looped from one compressor station to another. Discovery of new deep sand in the Refugio Field in Refugio County and discovery of new gas production in the Mirando territory has thrown a greater burden on the company's lines than was anticipated when they were built and the added pressure has relieved the company of the necessity for operating the Edna compressor station in Jackson County.

GULF COAST FIELDS

(Continued from Page 49)

also Brazoria County, is drilling ahead around 1,400 feet.

Rich Oil Corp. has abandoned temporarily his No. 1 Lee, Wharton County, and is moving the rig back on No. 1 Von Rosenburg, Colorado County, which has been shut down pending the drilling of No. 1 Lee.

Spindletop—Jefferson County

Yount Lee Oil Co. completed three small wells at Spindletop, No. 53 Gladys City and No. 55 McFaddin, each making 900 bbls. daily. No. 14 Gladys, an old well, was brought in for 500 bbls. The latter is in sand at 3,650 feet and the two former at 4,800 and 5,050 feet, respectively. Magnolia Petroleum Co. also put No. 1 fee on the pump making 49 bbls. of oil net. Gulf Production Co.'s No. 230 Gladys is to be put on the pump at 815 feet. This company's No. 13 Oakwood is drilling at 5,068 feet, No. 13-A Weed at 3,912 feet, No. 12-A Weed at 5,260 feet. Gulf has a rig up for No. 19-A Marrs McLean and is preparing to deepen No. 8 Jack & Duff. Rio Bravo Oil Co.'s No. 54 T.&N.O. is drilling below 4,450 feet. Sun Oil Co.'s No. 20 McLean is down 5,460 feet. Sun also has a rig up to deepen No. 2 Price, which was abandoned last February at 5,375 feet. No. 1 Prather is drilling around 1,100 feet. The Texas Company's No. 1 Gladys City, the farthest north test on the west flank, is drilling below 2,300 feet. Traders Oil Corp.'s No. 1 Cissell, north of Spindletop, is drilling below 3,720 feet. Battleship Oil Co.'s No. 3 Parker, northeast flank, is drilling around 3,400 feet.

Blue Ridge—Fort Bend County

Three wells were completed in Blue Ridge during the week. Fort Bend Oil Co.'s No. 1 Blakely is flowing 1,000 bbls. daily from a total depth of 2,025 feet. Navarro Oil Co.'s No. 1-B Robinson brought in flowing initially at the rate of 200 bbls. pipe line oil daily at a total depth of 3,630 feet. This well had been abandoned temporarily at 4,051 feet but sidetracked at 3,538 feet and drilled to 3,630 feet. Navarro Oil Co. also has another well in its No. 3-B Robinson which came in flowing 100 bbls. daily from 3,640 feet. The Gulf Production Co. is abandoning its No. 11 West Schenck after testing salt water at 4,659 feet. This company has rigs up for No. 12 Luscher and No. 11 Blakely. Blakely & Mean's No. 1 Blakely is drilling at 3,420 feet, deepening after testing salt water at 3,315 feet. H. R. Cullen's No. 1 Luscher is drilling at 4,115 feet, this operator's only remaining test at Blue Ridge following the completion of his No. 1 Davidson and his No. 1 Lafferty last week. Cunningham Production Co.'s No. 1 Blakely which has been rigged up to deepen since last December has started operations and is down 2,950 feet. H. G. Nelm's No. 1 Overly is drilling at 1,275 feet. Sam Watts and associates are rigged up for their No. 3 Blakely. Sinclair is building a derrick for No. 1 Davidson.

Pierce Junction—Harris County

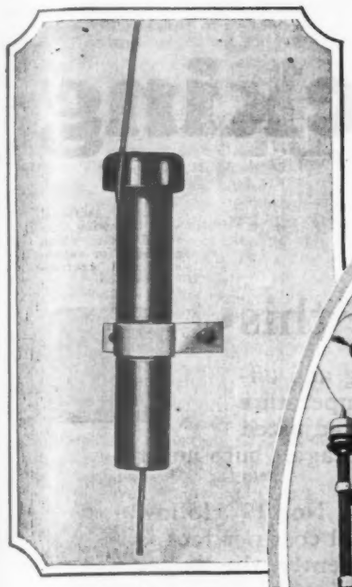
Rio Bravo Oil Co.'s No. 7 B. Settegast has been completed flowing 125 bbls. from sand 4,343 feet. This company's No. 8-A Settegast is drilling 4,525 feet. No. 101 G.H.&S.A. is down 5,610 feet. No. 2, on the same track, is down 4,442 feet. Rio Bravo's No. 1 is drilling at 3,265 feet. Gulf Production Co. failed to get a well in No. 1 Saunders at 4,200 feet and is drilling deeper. This company set casing at 4,125 feet in No. 24 Taylor and Saturday was bailing. This company has a rig up for No. 25 Taylor, Anderson & Plumber's No. 2 Whitehead is fishing at 4,520 feet. Joe Bashara is down 3,835 feet in his No. 1 Fice. Cullen and associates' No. 4 Howe is drilling at 4,200 feet. Moody Corp. has set strainer for a test of sand at 4,360 feet. This company is also perforating casing which is set at 4,630 feet in its No. 1 Cooper. This company in its No. 1 Marland fee is drilling at 5,035 feet. No. 2 Whitehead is down 2,290 feet. This is the second hole for this test. Navarro Oil Co. has rigged up to deepen its No. 2 Caine. Its No. 2-A Caine is drilling at 5,295 feet. T. G. Shaw is rigging up for No. 2 Fitzsimmons.

Goose Creek—Harris County

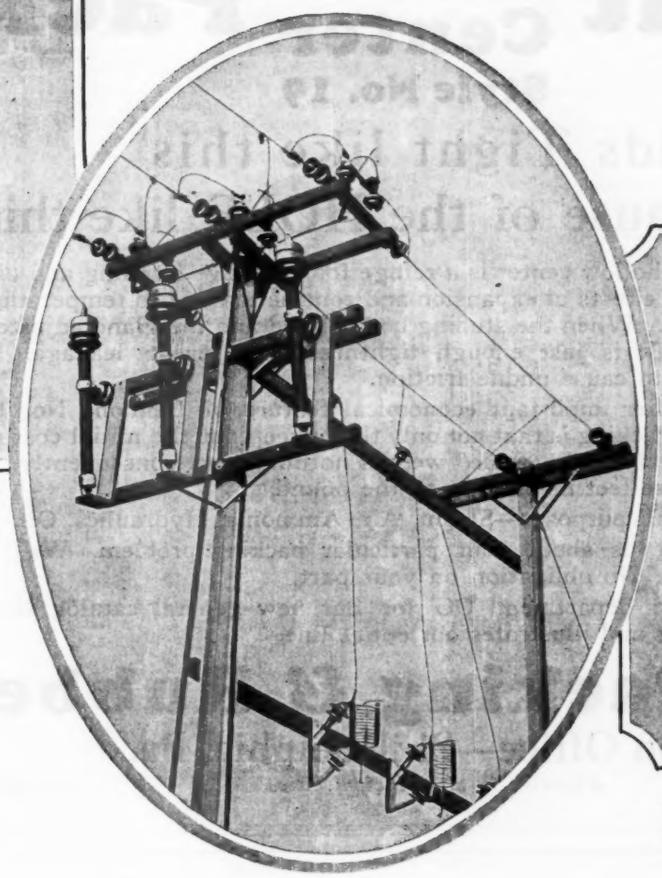
Humble Oil & Refining Co. has completed No. 5 Gillard (5 acres) flowing 100 bbls. daily from sand at 2,951 feet. This is an old well drilled deeper. This company's No. 73 Simms Smith is standing at 5,288 feet. No. 10 Sweet is drilling hard sand at 2,588 feet. Gulf Production Co. tested salt water at 3,060 feet in No. 16-A Tabb, and is pulling strainer to deepen. This company's No. 19 Hoffman Gaillard is drilling at 3,120 feet. Lubewell Oil Co.'s Dannenbaum has been shut down at 1,600 feet.

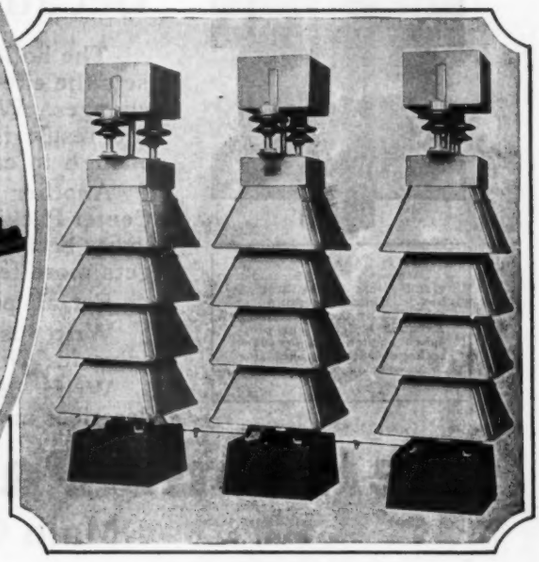
Hull—Liberty County

Republic Production Co.'s No. 73 Dolbear tested salt water at 2,852 feet but will be deepened. This company's No. 4 Dolbear also tested salt water at 2,580 feet but has been shut down. No. 7 Dolbear is drilling at 2,697 feet. The Texas



Pellet-type lightning arrester rated at 7500 volts





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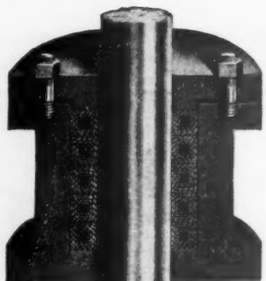

Belmont No. 19 under gland pressure in stuffing box. Undue pressure is taken up by the center hole. Expands under slight pressure enough to prevent leakage without excessive wear or friction.

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Company and the Vacuum Oil Co.'s No. 7 Hannah is down 4,842 feet where it is mixing mud. Mecon Oil Co.'s No. 4 Taylor is sidetracking at 4,025 feet. Houston Oil Co. has a rig up to deepen No. 4 Taylor. Gulf Production Co.'s No. 40 Phoenix is drilling at 2,600 feet. Empire Gas & Fuel Co. has started operations in its No. 28 Barngrover, and is down 910 feet.

High Island—Galveston County

Gulf Production Co.'s No. 2 Smith has been abandoned temporarily at 4,946 feet. The rig has been moved to No. 1 League. This company's No. 2-A Smith is drilling at 2,825 feet. McLean Oil Co. has a rig up No. 12 Cade. This company's No. 6 Cade, an old well, is fishing at 3,325 feet.

Orange—Orange County

Brownie-Babbette Oil Co.'s No. 8 McLean has been completed pumping 300 bbls. of fluid of which 90 per cent is sediment and water, from a sand at 4,075 feet. Gulf Production Co.'s No. 2-A Kishi-Lang is drilling at 3,100 feet. No. 6 Chessom tested salt water at 3,504 feet and casing is being perforated at 2,500 feet. Rex Petroleum Co.'s Carbello is drilling at 3,140 feet. Ryeade Oil Corp.'s No. 13-E State in Cow Bayou is drilling at 4,810 feet. Sun Oil Co.'s No. 2 Brown is down 4,989 feet. Supreme Oil Co. has a rig up to deepen No. 2 Jackson. Atlantic Oil Producing Co. has a rig up to deepen No. 3 Hager. Tillery has a location for No. 4 State.

Hardin County Domes

At Batson Ada Bell Oil Co.'s No. 118 Producers is bailing for test of sand at 1,043 feet. East Batson Oil Co. has a location for No. 5 Conzelman-Carary. J. R. Everett has started a new test with No. 3 King which is down 470 feet.

At Saratoga Gulf Production Co.'s No. 25 B.B.B.&C. is to be put on the pump at 1,050 feet. Rio Bravo Oil Co.'s No. 81 Jordon is drilling at 1,180 feet.

Chappell Oil Co. has a rig for No. 1 Hale, 5 miles northwest of Sour Lake Field. Gilbert Oil Co., at Sour Lake, has started operations at No. 101 fee and is drilling at 440 feet. Gulf Production Co.'s No. 1 Hamman is drilling at 2,892 feet. No. 3 Thomson is drilling at 3,890 feet. Theis Oil Co.'s No. 3 Merchant tested salt water but is to be deepened.

Barbers Hill—Chambers County

Mount Bell View Oil Co. has a location for No. 1 Williams, 50 feet out of the northeast corner of the south half of the Williams tract. R. L. Bartlett's No. 1 Fisher still is fishing drill stem.

West Columbia—Brazoria County

The Texas Company's No. 52 Hogg is drilling at 2,965 feet. Gulf Production Co. has a rig up to deepen No. 1 Tom Hogg.

Moores Field—Fort Bend County

Gulf Production Co.'s No. 15 Moore is drilling at 3,250 feet.

SOUTH LOUISIANA FIELDS

Jennings—Acadia Parish

Yount Lee Oil Co.'s No. 2 Latrielle has been abandoned as dry after drilling to 3,740 feet. The only other drilling test in the field is E. L. Myer's No. 2 Arnandet, an old well being deepened. It now is down 1,700 feet.

Lockport—Calcasieu Parish

Vacuum Oil Co. and Gulf Refining Co.'s No. 3 Farquhar was brought in making only about 5,000,000 feet of dry gas from a sand tested at 3,747 feet. No. A-1 fee is coring at 5,711 feet. No. 6 Bordages is drilling hard sand at 2,473 feet. In No. 1 Calcasieu River, 13⅜-inch surface casing has been set at 1,237 feet. No. 5 Lock-Moore has been spudded in and is drilling in sand below 60 feet.

Edgerly—Calcasieu Parish

W. M. Burton is moving in a rig for No. 1 Koonce. Green Oil Co.'s No. 9 Moore is being put on the pump in a sand below 3,200 feet. Rex Petroleum Co.'s No. 8 Hunter tested salt water at 3,570 feet but will sidetrack and drill deeper. Wilson-Broach's No. 3 Wilson has set liner for a test at 3,450 feet.

Vinton—Calcasieu Parish

Marrs McLean's No. 1 G.&N.G. tested salt water at 2,110 feet. Seiss Oil Corp.'s No. 5 Green has been completed pumping 25 bbls. of oil from sand at 2,640 feet. Vinton Petroleum Co. has a rig up to deepen No. 17 Gray and has a location and is rigging up for No. 62 Gray. It also is rigging up to deepen No. 1 Rescue.

Starks—Calcasieu Parish

Gulf Refining Co.'s No. 10 Industrial Lumber Co. is drilling at 3,625 feet.

TWO MUSKEGON DISAPPOINTMENTS FAIL TO HALT NEW OPERATIONS

By Special Correspondent

MUSKEGON, Mich., Mar. 13.—Two disappointments in the Muskegon, Mich., Field apparently failed to put a crimp in operations for outlining its extent and possibilities, as six new wells were started, two additional rigs are building and three new locations for which two more rigs are being shipped here were announced.

To begin with, the Johnson Oil Refining Co.'s No. 1 Cihak, in Section 3 of Muskegon Township, came in a duster after the Traverse sands were located more than 100 feet lower than in the discovery well. This hole was abandoned, although it was first announced it would be drilled in to the Dundee sands.

The other disappointment came when the Bulldog Oil & Gas Co. lost its rock bit at a depth of about 700 feetin No. 1 Charles I. Giles, located in the SE cor. of Section 6, Muskegon Township. The rig was immediately moved over about 25 feet and drilling had reached a depth of 250 feet by the close of the week.

There are now 13 rigs drilling in the field. New operations started last week include: Dixie Oil Co.'s No. 1 Figge, about 800 feet directly south of the Muskegon Oil Corp.'s No. 1 Figge, now producing at the rate of 125 bbls. very 24 hours; A. S. Cochran's No. 1 Taggart, located just over the line in Section 4, Muskegon Township, about a quarter of a mile north of the same producer; Joliet-Morris' No. 1 Nichols, in Section 8 of Muskegon Township, about a half mile west of the producers; Lake Shore Petroleum Co.'s No. 1 Dow, in the NW cor. of Section 4, about a half mile from the producers; the West Michigan Oil Syndicate's No. 1 Marquardt well, within the city limits of North Muskegon, about a mile southwest of the producers; and the Muskegon Oil Corp.'s No. 1 Herman Heinz, offsetting A. S. Cochran's No. 1 Taggart.

Formations northeast, south and north of the two producers are running low, indicating a comparatively small dome and field. Possibilities to the west, southwest and northwest, however, have not yet been tested by present operations.

Two wells are expected to come in or develop into dry holes within the near future. One is the Citizens Petroleum Co.'s No. 1 Becker Brothers, which had not struck the Traverse sand at 1,700 feet. Surface e'evation of this well is about 40 feet above the discovery wells, where the sands were found at 1,658 and 1,661 feet, respectively. The Becker well is about 25 feet lower in formations than the producers. It is located about a half mile almost due north of No. 1 Reeths, the Muskegon Oil Corp.'s discovery well, now producing 50 bbls. every 24 hours.

The other well which is expected to be drilled in soon is the Lima Oil Corp.'s No. 1 Margaret Figge. This well was cased off at 1,592 feet above the limestone cap. The well is 43 feet lower in surface elevation than the discovery well above it on the hill overlooking the Muskegon River flats. The Lima well is located on the flats.

Following this, indications are that the Dixie Oil Co. will bring in a successful well on the flats adjoining the Lima well and directly below the discovery well. This well was drilling at 1,240 feet last week after finding gas at 520 feet, traces of oil at 600 feet and additional traces of oil in the Berea sands at about 1,100 feet.

LA.-ARK. WILDCATS

(Continued from Page 51)

sand formation. Grant Parish, Louisiana, was the location of another wildcat failure. W. D. Ball and others abandoning No. 2 Calhoun, Section 4-7-4, at 1,800 feet. Hazlett & Simmons' No. 2 Neeley, Section 1-14-12, Red River Parish, was abandoned at 1,925 feet.

Two very rank wildcats got under way during the week, each of them on large blocks. Empire Gas & Fuel Co. has derrick up for No. 1 Nicholson in Section 33-17-14, Caddo Parish, on a 3,500-acre block in the vicinity of Reisor, about 15 miles southwest of Shreveport where, several years ago, there was quite some activity. This drilling resulted in shows of both oil and gas at shallow levels and one test had shows at around 2,600 feet where they were not followed up owing to more certain results in El Dorado and Haynesville.

Red River Wildcat

The other "very rank" wildcat is in Red River County, Texas, up in the northeast corner of the State, and the circumstances of its being drilled are very similar to the Empire venture. Fourteen or 15 years ago the Texas & Pacific Railroad drilled a well for locomotive water near the town of Annona and got a gas blowout at a shallow depth, around 600 to 900 feet, and plugged the hole. Between 1919 and 1925 five other wells were drilled to shallow depths in the same vicinity in each of which shows of oil and gas were claimed. They were drilled by amateur talent and consequently lost, but now Hunter & McCormick of Shreveport, experienced operators, have assembled a 6,000-acre block in this locality and have started a deep test.

Closer to Shreveport Simmons and others have started a magnetometer survey of territory south of Pleasant Hill production in Sabine Parish, and Gulf Refining Co. is continuing its torsion balance survey of southern DeSoto Parish and also northeast of Mansfield, the parish seat.

Simmons & Harrell failed to get the shallow gas, around 900 feet, in their wildcat just south of Shreveport city limits, No. 1 Myer, Section 21-17-13, and will skid 400 feet to drill No. 2, expecting to be higher on structure, anticipating fuel for a deep test further south.

In East Texas, Magnolia Petroleum Co. has started No. 2 Pickering on the W. J. Crane Survey in Shelby County after abandoning No. 1 on the same lease as a dry hole at 3,805 feet after a test at 3,708 feet had failed to produce.

In Arkansas, Rhodes and others' No. 1 Union Sawmill, Section 14-19-11, Union County, 25 to 30 miles southeast of El Dorado, has been coring all the way down with the following results: At 944 feet it was in the Wilcox, at 1,112 feet the same formation that Urania, La., produced from, and at 1,156 feet it was in broken shale and sand. Several other wells in that locality have failed to produce more than just enough encouragement to keep on drilling. The Texas Company and H. L. Hunt, further northwest, both got considerable showings at around 2,600 feet but it looked like dead oil. Due south, in Section 19-24-25, there was considerable of a flurry in Union Parish, Louisiana, over what just missed being commercial producers. Several wells were drilled which made considerable oil but with such large amounts of water they were not profitable at the time.

Late in the week Benson Oil Co.'s No. 2 Wolff in Section 3-10-13 blew in with an estimated 8,000,000 feet of gas with a spray of water but no oil while going in to set liner. Ten fourbles of drill stem with liner were hanging in the hole and efforts were being made to kill and reset when the last report came in. Location is a shore distance from No. 1, a 30-bbl. producer at around 3,012 feet. Total depth is 3,064 feet with 28 feet of broken formations whereas No. 1 had about 8 feet of true sand.

Mississippi Developments

Transcontinental Oil Co. and The Texas Company will go deeper with No. 1 Day, Section 18-16-18, Monroe County, after the salt water show, with plans to set 6-inch at around 3,100 feet. Moody & Seagraves' No. 1 Whitesides, Section 6-9-7, Lee County, is drilling with 3,100 feet as new contract depth, finding salt water at around 2,858 feet in place of sulphur water tapped higher up and which had filled the hole several hundred feet. Alcorn Petroleum Co. is setting 6-inch at 694 feet to test a small show in No. 1 Matthews, Section 14-2-7. Amory Petroleum Co. will drill a second well within 800 feet of the discovery gasser, No. 1 Carter, Section 7-13-7, Monroe County. The same company has resumed work on No. 1 Hall, Section 8-13-17, on another effort to get out a bunch of junk lost several months ago.

These activities have encouraged organization of the Mississippi Petroleum Co. which, it is announced, will drill somewhere between the Natural Gas & Fuel Corp.'s No. 1 Rye, Section 22-15-17, and The Texas Company-Transcontinental's No. 1 Day, Section 18-16-18, Monroe County. Memphis and local capital are backing the project.

Bienville Parish

Humble Oil & Refining Co., which has rig up for a 4,000-foot test in Bienville Parish, No. 1 Anderson in Section 29-18-5, has made location for a second wildcat in the same parish, No. 1 Calhoun, 2,490 feet north and 66 feet west of SE cor. Section 16-18-7. Borden and others' No. 2 L. & A., Section 1-15-8, has been shut down at 500 feet, waiting orders, for the last month.

Bossier Parish

Arkansas Natural Gas Co. has made location for a semiwildcat in the Cartersville district, No. 1 Crawford, being in the center NW NW Section 6-22-11. H. S. Goodwin's No. 2 Curtis, Section 36-17-13, is drilling lime at 2,810 feet. Rogers and Jensen have begun drilling No. 1 Ledbetter, Section 7-18-11, southwest of the Bellevue shallow pool. Triangle Drilling Co. has rig up to drill No. 1 Bulkley, Section 9-20-13, 3 miles north of Benton. Walker and others have gone back to No. 1 Antrim, Section 28-22-13, which has been shut down since the latter part of January and are washing to bottom at 2,850 feet.

Caddo Parish

Empire Gas & Fuel Co. has made location for No. 1 Nicholson, 1,330 feet north and 700 feet east SW cor. Section 33-17-14, 2 miles east of Reisor. Greenwood Production Co.'s No. 1 Cooper & Ellerbe, Section 15-21-15, is shut down at 3,238 feet waiting for heavier rig. Simmons & Harrell are drilling No. 1 Mattie Myer, Section 21-17-13, at 600 feet. The Texas Company set 10-inch casing at 108 feet and is drilling a rock at 162 feet on No. 5 Hutchinson, Section 15-15-12.

Catahoula

Leonard Petroleum Co.'s No. 1 Knott, Section 32-11-8, is drilling at 2,000 feet with 12½-inch surface casing set at 237 feet. Lochnager Oil & Gas Co.'s No. 3 Beasley, Section 26-9-6, is coring at 2,915 feet.

Claiborne Parish

El Dorado Chief Oil Co.'s No. 1 Jones, Section 8-20-6, is shut down at 700 feet for repairs to rig.

DeSoto Parish

American Controlled Oil Co.'s No. 1 Lanier, Section 7-11-11, is having trouble with caving hole and is cleaning out with cable tools, total depth 2,760 feet. Baca Drilling Co.'s No. 1 Stevens, Section 12-11-16, is waiting for 8-inch casing to be set at 2,320 feet. Benson Oil Co. is in hard lime at 2,925 feet on No. 2 Wolff, Section 3-10-13. Dixie Oil Co.'s No. 1 Jenkins, Section 9-12-11, had a small gas show at 6,149 feet and is fishing for tools. R. O. Roy's No. 1 Tracy, Section 3-13-13, is drilling with 10-inch surface casing set at 210 feet; No. 1 Whitaker, Section 5-13-13, is shut down for fuel at 1,160 feet. The Texas Company's No. 5 Grand Bayou Planting Co., Section 25-23-12, is waiting on standard rig to pump

at 2,460 feet after being deepened 45 feet for a second completion.

Lincoln Parish

H. M. Harrell hit a rock at 195 feet with No. 1 Griffin, Section 17-19-1w, which he began drilling March 1.

Monroe District

Morehouse Parish — Elbert Petroleum Co.'s No. 1 Morehouse Planting Co., Section 40-19-7, is drilling at 1,010 feet. Gulf Refining Co. is rigging up to drill No. 1 Higginbotham, Section 42-20-7. The Texas Company's No. 1 Myers in Section 15-22-7 is shut down at 2,392 feet waiting for rotary. United Carbon Co. is drilling No. 1 Bastrop Pulp & Paper Co., Section 18-21-6, at 600 feet.

Ouachita Parish—J. P. White's No. 1 Schmidt, Section 3-15-4, set 8-inch casing at 907 feet. Phillips and others are rigging up to drill No. 1 School fee in Section 16-16-4.

Union Parish—Barbour Oil Co. is making arrangements to go deeper with No. 1 Tugwell, Section 21-22-1e, shut down at 2,425 feet. Carter & Goodwin's No. 1 Security Trust, Section 7-23-1e, reported standing with hole full of salt water last December, is reported waiting on standard rig, total depth 2,254 feet. Moody & Seagraves' No. 1 Robertson, Section 34-23-3e, set 8-inch casing at 760 feet and is drilling at 1,350 feet. Ouachita Natural Gas Co. is rigging up to drill No. 1 Hamilton, 3,840 feet west and 1,295 feet north of SE cor. Section 22-19-1e. W. R. Rhodes' No. 1 Upshaw is a derrick 200 feet south and west of NW cor. NW SW Section 14-23-2w.

Rapides Parish

Glenmora Petroleum Co. is drilling No. 1 fee in the NW NW Section 1-2s-2w. Minnesota Oil Co. set 80 feet of 10-inch casing and is drilling at 1,100 feet on No. 1 Wettermark, Section 13-5-4.

Richland Parish

Gulf Refining Co.'s No. 1 Millsaps, Section 8-17-6, is in broken sandy lime at 3,020 feet; No. 1 Ches. Wymons, Section 20-18-6, is fishing for drill stem, total depth 2,506 feet. Moody & Seagraves' No. 1 McDonald, 3 miles south and west of production, tested dry with no show at 2,400 feet and is drilling at 2,427 feet. Now & Meredith had a blowout estimated at 3,500,000 feet of gas in No. 1 Meredith, Section 4-15-6, 2 miles south and east of the nearest producers, at 2,369 feet, but mudded it off and are going deeper. Oliver & Masters' No. 1 Margie Hatch, Section 2-15-5, is drilling at 2,000 feet. Ruston Drilling Co. has made location 1,500 feet north and 1,980 feet east SW cor. NW Section 9-16-6, for No. 1-B Sartor. Woodley Petroleum Co. cemented 6-inch at 2,350 feet on No. 1 Osborn, Section 3-17-7.

Sabine Parish

W. G. Doerne's No. 1 Pickering, Section 17-4-11, is shut down at 2,025 feet, corercted depth.

Winn Parish

Ohio Oil Co. is drilling hard sand rock at 4,696 feet on No. 2 Rolen Acct. 1, Section 5-12-1w. H. M. Roark's No. 1 Southern Minerals Co., Section 19-11-3w, is drilling at 1,150 feet.

ARKANSAS

Bradley County

Johnson & Adams' No. 1 Southern Lumber Co., Section 12-12-12, is drilling at 2,780 feet.

Clark County

William Henry's No. 1 Clark, Section 34-9-21, is shut down at 510 feet.

Columbia County

George Dawley is drilling shale at 1,500 feet on No. 1 Gantt, Section 12-17-22.

Dallas County

Decman and others are drilling below 100 feet on No. 1 Hillman, Section 20-10-13, which began making hole March 5.

Grant County

Jones & Watkins, whose No. 1 Meek, Section 5-4-11, has been shut down at 1,400 feet since last August, are reported arranging to clean out the hole and start drilling again.

Nevada County

Autrey Oil Co. has derrick up for No. 1 Graves, a semiwildcat, just north of production, 150 feet north and east SW cor. SE SE, Section 31-13-20.

Miller County

Bruton and others are in the chalk rock at 1,982 feet with No. 1 Red River Farms, Section 2-17-26, and Lenz and others' No. 3 Dale, Section 23-15-26, is drilling at 1,990 feet.

Union County

W. R. Keever has 6⅝-inch casing cemented at 2,133 feet in No. 2-B Kavanaugh, Section 12-17-15. Lyell and others' No. 1 Stegall, Section 11-17-13, Urbana district, was dry at 2,300-65 feet and is drilling at 2,390 feet. Magnolia Petroleum Co. has derrick up for No. 4 Cranston, Section 19-17-14. Rhodes and others' No. 1 Union Saw Mill, Section 14-19-11, set 12-inch surface casing at 99 feet, cored water sand at 942 feet and is coring at 1,221 feet.

Mississippi

Lauderdale County

Lauderdale Oil & Gas Co.'s No. 1 Gunn, Section 13-7-16, is coring at 3,290 feet.

Lee County

Moody & Seagraves' No. 1 Whitesides, Section 16-9-7, is drilling lime at 2,880 feet.

Monroe County

Amory Petroleum Co.'s No. 1 Hall, Section 8-13-17, is fishing for three joints of 6⅝-inch casing and tools lost at 2,370 feet. Transcontinental Oil Co. and The Texas Company's No. 1 Day, Section 18-16-18, is drilling coarse brown sand at 3,050 feet.

LOUISIANA-ARKANSAS

(Continued from Page 51)

is fishing for lost bailer. This well was completed April 7 last year, with 1,000 bbls. oil and 20,000,000 feet of gas, total depth 3,096 feet, and was shut in for construction of earthen storage and when open flowed at about the same rate for some time before salt water got it. Magnolia Petroleum Co. is setting 8⅛-inch casing at 3,097 feet in No. 1 Cason, Section 1-22-12. Natural Gas Products Co.'s No. 1 Floyd, Section 25-23-12, is drilling at 2,880 feet. Northwest Louisiana Gas Co. has derrick up for No. 1 Barnett, 1,320 feet west and 660 feet north SE cor., Section 25-23-12. Palmer Corp. reamed to bottom and set liner at 3,068 feet to retest No. 1 Robertson, Section 26-25-12, which went dead after showing for a producer. Woodley & Collins' No. 1 Bain, Section 31-23-12, has 6⅝-inch casing cemented at 3,085 feet; No. 1 Bollinger, Section 36-23-12, has 6⅝-inch casing cemented at 3,068 feet.

Elm Grove and Sligo—Arkansas Natural Gas Co. has derrick up for No. 1 Van Hoose, 1,550 feet south and 500 feet west NE cor., Section 36-16-12. Ellis & Markley's No. 5 Hunter, Section 14-16-12, has drill stem stuck at 1,658 feet. H. S. Goodwin's No. 1 Mercer, Section 21-16-12, is in sand rock at 1,943 feet. J. S. McCullough's No. 6 Hodges, Section 25-16-12, is waiting on standard rig to pump, total depth 1,548 feet. Palmer Corp.'s No. 9-B Hodges, Section 25-16-12, has 10-inch set at 100 feet and is drilling. R. O. Roy is drilling No. 7 Caplis, Section 25-16-12, at 1,210 feet.

Caddo Parish

Greenwood—Belchic & Laskey's No. 4 R. T. Sharp, Section 10-18-16, is drilling at 1,280 feet. Magnolia Petroleum Co. has derrick up for No. 2 J. W. Furrh, Section 28-18-16. No. 2 Bell, Section 4-17-16, cored shale at 1,852 feet.

Pine Island—Dixie Oil Co.'s No. 81 Dillon, Section 13-21-15, is coring at 4,097 feet; No. 90 Dillon, Section 14-21-15, is waiting on standard rig, total depth 4,054 feet; No. 91 Dillon, in the same section is drilling at 1,904 feet, and No. 92 Dillon, Section 13-21-15, bailed dry at 4,075 feet and is going deeper. No. 4 H. H. Huckaby, Section 11-21-15, is coring at 4,006 feet.

Magnolia Petroleum Co.'s No. 8-A Hampton, Section 15-21-15, is reaming to bottom, total depth 4,010 feet; No. 22 Robertshaw, Section 23-21-15, set 8⅛-inch casing at 3,871 feet. Pittsburgh Oil & Development Co.'s No. 1 Herndon, Section 15-21-15, tested salt water at 4,017 feet in 7 feet of what appeared at first to be a good sand. D. C. Richardson estate's No. 1 Youree-Randolph, Section 13-20-15, cored at 2,284 feet.

The Texas Company's No. 9 A. Herndon, Section 14-21-15, is pulling 4½-inch casing; No. 13-B Noel, Section 14-21-15, is fishing for drill stem, total depth 3,979 feet.

Oil City—Standard Oil Co. set 8-inch casing at 1,225 feet and is arranging to test No. 1-B Barry, Section 11-20-16, at 1,526 feet.

Monroe District

Ouachita Parish—Amalgmated Co. began drilling No. 1 Cole, 707 feet north and west SE cor., Section 7-19-4, March 1, and has 12½-inch surface string set at 186 feet and 8-inch at 836 feet. Hatcher & Evans are rigging up on No. 7 fee, Section 21-19-4. Imperial Oil & Gas Products Co.'s No. 5 Stubbs, Section 13-19-3, cemented 6-inch casing at 2,114 feet. Jordan Drilling Co.'s No. 1 Pereboom, Section 32-19-4, has rig up. Ouachita Natural Gas Co.'s No. 9 Smith, Section 29-20-4, began drilling February 23, set 12½-inch at 289 feet and 8-inch at 890 feet. Palmer Corp.'s No. 3 Kate Cole, Section 38-20-4, is drilling, work starting March 4. Pioneer Oil & Gas Co.'s No. 1 Filhoil is a location 2,058 feet west and 494 feet south NE cor., Section 11-18-4. United Carbon Co. cemented 6-inch pipe at 2,130 feet in No. 2 Nelson fee, Section 6-19-5.

Union Parish — Industrial Gas Co.'s No. 2 Hill, Section 9-20-3e, is drilling at 1,600 feet, and No. 1 Lewis, Section 14-20-3e, is a derrick. United Carbon Co. has made location, 660 feet north and east of the center of Section 7-20-4, for No. 1 Peek, and 1,980 feet north and west SE cor., Section 19-20-4, for No. 1 J. G. Trimble.

Richland Parish

Dixie Oil Co. is rigging up on No. 1 McCoy, Section 29-16-6. W. C. Feazel set 12½-inch surface casing at 192 feet in No. 1 Duff, Section 21-16-6, and 8-inch at 863 feet. Gulf Refining Co.'s No. 3 Rhymes, Section 28-17-6, is in gumbo at 2,365 feet. Moody & Seagraves' No. 1-A Sartor, Section 8-16-6, is drilling at 2,220 feet; No. 1-C Sartor, Section 17-16-6, is drilling at 1,820 feet. Natural Gas & Fuel Corp.'s No. 3-C Thomason, Section 21-16-6, is drilling at 1,800 feet and No. 4-C in the same section has 15½-inch casing cemented at 190 feet. Ruston Drilling Co. has location for No. 1-B Sartor, 1,500 feet north and 1,980 feet east SW cor. NW, Section 9-16-6. Southern Carbon Co.'s No. 1 Spann, Section 8-16-6, is drilling at 2,318 feet.

Sabine Parish

Magnolia Petroleum Co. has made location 200 feet south and west NE cor. SW SW, Section 33-10-12, for No. 1-B Hall.

Webster Parish

Cotton Valley—Humble Oil & Refining Co.'s No. 6 Davis is a new location 1,980 feet west SE cor. Section 14-21-15; and No. 2 Webb, Section 14-21-15, is drilling at 200 feet. Magnolia Petroleum Co. is fishing for lost drill stem in No. 1 J. M. Mixon, Section 22-21-10, total depth 4,214 feet. Ohio Oil Co.'s No. 38 Bodcaw, Section 15-21-10, is in anhydrite at 4,459 feet; No. 2 Crichton, Section 21-21-10, cemented 6⅝-inch casing at 4,434 feet, and No. 2 Hodges is a new location in the C NW SW Section 23-21-10. Palmer Corp. has derrick up on location for No. 1 Mixon, Section 22-21-10.

Sarepta and Shongaloo—Arkansas Natural Gas Co. has derrick up for No. 1 Mitchell, Section 30-23-9; and No. 1 North Central Texas, Section 36-23-10, completed February 3 with 1,500,000 feet of gas at 2,720 feet, is being drilled deeper, coring at 3,092 feet. C. H. Lyons and others' No. 1 Munn, Section 1-22-10, set 300 feet of 12½-inch surface casing and is drilling at 1,880 feet; No. 1 Porter-Wadley Lumber Co. tested 1,000,000 feet of gas at 2,700 feet and is going deeper, and No. 2 Porter-Wadley is a new location 600 feet south and 1,980 feet east NW cor. SW Section 29-23-9. Magnolia Petroleum Co. has rig up to drill No. 1 Camp, Section 36-23-10, and No. 1 R. J. Munn, Section 29-23-9, cemented 6⅝-inch casing at 2,647 feet. The Sun Company began drilling No. 1 Haines, Section 30-23-9, February 29, and has 12½-inch casing landed at 280 feet.

ARKANSAS

Nevada County

Autrey Oil Co.'s No. 1-F J. Haynie, Section 6-14-20, is waiting on standard rig to pump 3 feet of sand, total depth 1,227 feet.

Ouachita County

Little Fay Oil Co.'s No. 5 Robertson, 250 feet east and south NW cor. Section 25-15-16, began drilling March 4, set 10-inch surface casing at 56 feet and is making hole. Ohio Oil Co.'s No. 7 Cramer, Section 22-15-16, is reaming to bottom, total depth 2,400 feet.

Union County

El Dorado—Mellor, trustee, cemented 6-inch casing at 2,173 feet to test 4 feet of sand in No. 1 Van Hook, Section 7-18-14, total depth 2,183 feet; No. 1 Bullock is a derrick 330 feet south and west NE cor. NE SW Section 7-18-14. Mountz and others' No. 6 Pratt, Section 8-18-15, is drilling at 2,175 feet.

Smackover—Lion Oil & Refining Co.'s No. 8 Hays, Section 4-16-15, began drilling March 5; and No. 7-C Murphy, Section 8-16-15, is a derrick.

Champagnolle—Eddy Jones has set 180 feet of 10-inch surface casing and is drilling No. 1 Stegall, Section 2-17-14, at 1,800 feet. Oilwell Corp.'s No. 1 Townsend, Section 10-17-4, plugged back and perforated casing at 2,600 feet and is temporarily abandoned, total depth 3,047 feet. Pure Oil Co. cemented 8¼-inch casing at 2,935 feet on No. 1 Gregory, Section 10-17-14, total depth 2,975 feet, after bailing dry on a show of gas at 2,952 feet. Simrall and others tested salt water at 3,079 feet in No. 1 Finley, Section 12-17-14, and have shut down for orders.

EAST TEXAS

Morrison County

Magnolia Petroleum Co. began drilling No. 2 A. G. Vincent in the R. W. Bedford Survey March 3 and has 13⅜-inch casing set at 148 feet. Tylong Oil & Gas Co.'s No. 1 R. W. Armstrong, Simpson Holloway Survey, is drilling at 2,580 feet. Waterman Brick & Tile Co. is rigging up to drill No. 6 Hickman, 2,950 feet north and 330 feet west southeast corner E. Pollock Survey.

Marion County

Trimount Petroleum Co. has derrick up for No. 7 Mebane-Stiles in the northeast corner of the Mebane-Stiles 157-acre tract in the N. Gupton Survey.

Panola County

S. H. Gardner and others have set 6⅝-inch casing at 2,213 feet on No. 1 Cavin, B. C. Jordan Survey. Hines and others' No. 1 P. W. Baker, George Goodwin Survey, is drilling at 2,967 feet. Lewellen & Hasenfuss have derrick up for No. 1 Hill in the E. F. Mitcheson Survey. Magnolia Petroleum Co. began drilling No. 1 T. C. Adams in the J. M. Birdsong Survey March 5, and has derrick up for No. 1 Martha Richardson, 2,300 feet east and 2,000 feet south northwest corner Benson Lovell Survey. No. 14 C. G. Steel, in the B. C. Jordan Survey, tested 800,000 feet of gas, 600 pounds rock pressure, at 2,287 feet, but will go deeper; No. 1 E. C. Tillery, in the Jane Thorp Survey, set 5⅛-inch casing at 2,342 feet to test a show of oil and gas in a lime formation at 2,352 feet, total depth 2,356 feet; No. 1 Leigh Trosper, B. Stevenson Survey, cored sandy shale at 1,971 feet. Natural Gas Products Co.'s No. 3 T. C. Adams, 330 feet north and west southeast corner Evans Brackins Survey, began drilling March 1 and has 10-inch set at 102 feet and 6-inch at 972 feet. The Texas Company is rigging up on No. 9-B T. C. Adams, 1,980 feet south and 660 feet west northeast Isom Hatcher Survey; No. 8-B Adams is temporarily abandoned at 1,100 feet after testing salt water.

Shelby County

Magnolia Petroleum Co.'s No. 2 Pickering, 3,840 feet east and 1,320 feet north southwest corner W. J. Crane Survey, is rigging up.

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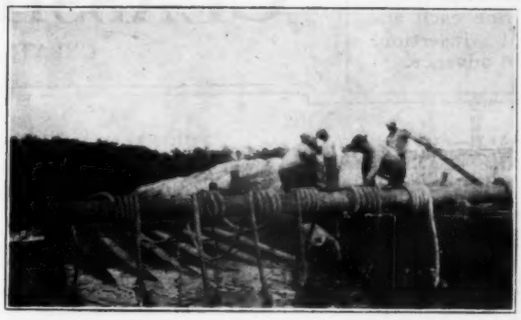

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PUBLICATIONS

WEST TEXAS OIL DIRECTORY
Indispensable to those interested in the oil development of West Texas. Gives names, addresses and phone numbers of Department Heads of Oil Companies, Independent Operators, Drilling Contractors, Supply Companies, Royalty Buyers, Banks, Abstractors, Lumber Companies and forty other classificatons. CORRECTED each sixty days during 1928 without additional cost. Price $7.50. Allen Building, San Angelo, Tex.

GEOLOGISTS

ATTENTION Lease Owners — Have your acreage examined by geologist who has the official credit for the Corsicana-Powell deep oil field. Dr. Q. O. Gaither, 1728 Alston Ave., Fort Worth, Tex.

HELP WANTED

OIL REFINERY DRAFTSMEN
Capable men who understand piping layouts and furnace or heat exchanger design. Location near New York City. Give full particulars of qualifications in letter. Box C-680, Room 629, 101 Park Ave., New York, N. Y.

WANTED — Draftsmen on refinery equipment, experienced in structural steel, plate work, concrete and pipe layout. Location, Chicago. Box C-295, The Oil and Gas Journal, Tulsa, Okla.

GREASE CHEMIST wanted in research department of large eastern oil refinery near New York. Interesting work in development of new products and improvement of processes. Write, stating age, schooling, experience, salary, nationality and religion. Box C-293, The Oil and Gas Journal, Tulsa, Okla.

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

RANCHES AND FARM LANDS

PECAN, orange, fig groves, on Gulf; monthly payments; quick returns. Suburban Orchards, Dept. J., Biloxi, Miss.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

POSITIONS WANTED

EXPERIENCED production man; all kinds of pumps, air and gas lift. Now available. References. Box 624 Winfield, Kans.

CAPABLE PETROLEUM ENGINEER 8 yrs. experience Scouting, Production, Pipe lining, Refining. Okla., Texas, Calif. Desires position with company or individual. Go anywhere. Add Jack Abbott, 124 E. Ave. 44, Los Angeles.

GRADUATE ENGINEER, experienced in handling gas; single, employed, desires change. Foreign fields considered. Can be available. Box C-290, The Oil and Gas Journal, Tulsa, Okla.

SALESMEN, efficient and experienced with extensive knowledge of oil field materials, desires connection with manufacturer or distributor of oil field specialties. Box C-291, The Oil and Gas Journal, Tulsa, Okla.

EXECUTIVE'S SECRETARY — A young man, exceptionally well fitted by inclination and education of many years experience in oil and other lines, wishes position as secretary to a man of large affairs. I can relieve such a man of much work and prove my worth. Expert stenographer with best of references. At present in Tulsa. Box C-298, The Oil and Gas Journal, Tulsa, Okla.

PETROLEUM ENGINEER— Graduate geologist, 4 years experience, have given satisfaction in charge of subsurface work, petroleum engineering, geological and production departments major company, open for engagement after March 15 and can give best references. Age 26, married. Box C-294, The Oil and Gas Jornal, Tulsa, Okla.

WANTED — Position as oil stillman, prefer Mexico or South America; can give best of reference. Write F. A. G., care The Oil and Gas Journal, Tulsa, Okla.

WANTED—April 1, 1928. Position as Production Supt., 17 years experience in production, cable tools and rotary; 12 years with large company. Best of references. Address Box C-300, The Oil and Gas Journal, Tulsa, Okla.

CLASSIFIED advertisements in this section do pay well in money and in extended business relations. This has been proven by the continual advertising that we receive from the men in the oil industry, everywhere.

PRODUCTION ENGINEER, experienced in oil and gas lift, repressuring, oil treating, drilling wells Single; age 28 years. Excellent references. Box C-292, The Oil and Gas Journal, Tulsa, Okla.

I AM a young man with eight years experience in general office work and as Secretary and Treasurer of oil companies, seeking a new connection with a future and opportunity to use ability. Now in Tulsa. Best of references. Box C-299, The Oil and Gas Journal, Tulsa, Okla.

LEASES—PRODUCTION

SOUTHWEST TEXAS — WINKLER, Loving, Reeves, Ward, Pecos, Culbertson Counties.
Drilling blocks, Leases, Royalties.
Ranches in fee.
H. F. Anthony, Pecos, Tex.

FOR SALE BY OWNER OF LAND Oil and Gas leases or half royalty; some valuable, some cheap, situated in 5-8 Allen Oil Field, Pontotoc Co., 5-8 Chickasha Gas field, Grady County, 5-10 Hughes County, good prospect. 4-14 Atoka County, fair prospect. 5-14 Choctaw County, fair prospect. Also, other valuable stuff not here listed. Can also furnish other at reasonable figures in any county in Oklahoma. Correspondence invited. Box 684, McAlester, Okla.

HAVE GOOD block acreage, shale and sand gas possibilities; will sell or make drilling deal. G. W. Moore, Independence, Kans.

GAS AND OIL leases for sale in the new central Michigan oil fields. Inquire of W. W. Russell, Mt. Pleasant, Mich.

LEASES—PRODUCTION

NEW MEXICO—Leases in Lea and Roosevelt; cheap royalties in Roosevelt and Guadalupe; leases in any county; information regarding New Mexico developments. William U. Tate, Franciscan Hotel, Albuquerque, N. M.

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STATE OIL AND GAS leases in twelve New Mexico counties. Real opportunity. Wm. C. Uphoff, Decatur, Ill.

OIL AND GAS LEASE
SW ¼ and SW½ of SE¼ containing 240 acres in Sec. 64, McMullen Co., Texas, and 480 acres School land N½ and SE¼ of Sec. 340, Block 1-A, Coke Co., Texas. Cash bonus is required which may be deducted from production. Investigate, then make your offer. Jos. Manz, Olmitz, Kans

DEFINING Oil and Gas structure that will produce and locating—ten per cent. Box 302, Tonkawa, Okla.

TEN YEAR PAID-UP LEASES
TEXAS
3,200 acres N. W. Uvalde Co. at 75c; 1,700 at $1; 1,400 W. Central Kinney Co. at 80c; 1,100 S. of R.R. at 75c 10,000 to 70,000 A. E. Central Valverde Co. at $1.10. These in fee. 1,280 A. E. Central Brewster Co. at $3. 100,000 A. W. Webb Co., fine stock ranch, at $7.15. Samuel H. Smith, San Antonio, Tex.

FOR SALE—Oil leases near drilling wells in Hancock, Ohio, Daviess, and McLain Counties, Ky. Prices reasonable. J. C. Preston, 400 E. 3rd., Owensboro, Ky.

LEASES—PRODUCTION

GRADY—CADDO—CUSTER COUNTIES, OKLAHOMA
For sale, oil leases located on structure. Geological maps showing location of leases and adjoining lease owners furnished to reliable persons only. Robert Wilson, Kennedy Bldg., Tulsa, Okla.

OIL LEASES and royalties. Ector, Crane, Pecos, Reeves, Ward, Upton and Winkler Counties; buy or sell. C. H. C. Anderson, 712 Linz Bldg., Dallas, Tex.

FOR SALE—Leases, Oil Production, Asphalt, Limestone and Other Mineral Lands. W. P. Harlev, Bowling Green, Ky.

"IN THE TREND"
Southeastern New Mexico and West Texas counties — Lea, Eddy, Chaves, Gaines, Andrews, Winkler, Loving, Ward, Culberson and Pecos Counties, oil and gas leases, royalties and drilling blocks. We buy and sell. F. S. Blackmar. P. O. Box 541, Roswell, N. Mex.

WINKLER—PECOS COUNTIES
Leases and Royalties
W. S. PATTERSON
Pecos, Texas

LAND, leases, royalties for sale Okla., Texas. Waltman, Barnsdall, Okla.

THIS IS a real oil field with three real sands all producing, twenty to sixty feet thick. Leases for sale and drilling contracts. I. S. Callender, Owensboro, Ky.

FOR SALE or will make a drilling contract on a block of 1,000 acres of oil and gas leases in the Shale Gas Territory, Wilson County, Kans., good market for gas, low pressure line, company will come to the wells for the gas. Address Box C-253, The Oil and Gas Journal, Tulsa, Okla.

ROYALTIES—PRODUCTION

ROYALTIES, a limited amount of participating royalty interest is offered under a three well drilling program on close in lease in WINKLER COUNTY field. Particulars 461 First National Bank Bldg., El Paso, Texas.

HAVE $50,000 cash for good producing royalties preferably Oklahoma, Kansas and Louisiana; settled or semi-settled. Give full particulars. Address Box C-190, The Oil and Gas Journal, Tulsa, Okla.

BUYERS AND SELLERS of Mid-Continent oil Royalties. Inquiries invited. Joe P. Crawford & Co., Petroleum Bldg., Oklahoma City, Okla.

WEST TEXAS ROYALTIES
FOR SALE
Of prime consideration is the geological work accompanying each sale.
J. F. MARION OIL COMPANY
1213 Magnolia Bldg., Dallas, Texas

FOR SALE—Royalties in Lost Springs oil field, Marion, Co., Kansas. H. R. Hurd, Chase, Kansas.

ROYALTIES WANTED. Will pay cash for producing royalties, any size, priced right. Write legal description, number, age, depth, production of wells, full details and price. P. O. Box 1359, Tulsa, Okla.

WATCH NORTHEAST NEW MEXICO
Recommended by leading geologists. Buy ahead of production. Can NOW buy royalty at low prices.
UNION ROYALTY CO.
Petroleum Bldg., Oklahoma City, Okla.

IF YOU buy or sell royalties, leases, or production you should not overlook The Oil and Gas Journal Classified Wants. They comprise the best medium of exchange available to you.

OWNERS OF ROYALTY in West Texas Counties wishing to sell, submit to Box C-270, The Oil and Gas Journal, Tulsa, Okla.

TEST WANTED on block of 4,000 acres almost solid, favorable geology. In Grady County. Write E. E. McDowell, Verden, Okla.

FOR QUICK SALE 16 producing wells in a 1,000 acre lease in Montgomery County, Kansas. Entire lease proven, having drilled in five locations, therefore, have six small power plants and seven iron delivery tanks; all equipped and the lease a business doing, producing concern. 35 to 36 gravity oil. This lease is 7 miles North of Cherryvale, Kansas, locally referred to as the Shanton lease. Will sell for $50,000 CASH. For further information communicate with Harry B. Luntz, Chanute, Kansas, who is the local representative, or address A. V. Jackson Trustee Company (sole owners) room 1701 Union Central Bldg., Cincinnati, Ohio.

$10 OR MORE you may own perpetual deeded royalty Pecos, Winkler and other active West Texas counties. Drilling bulletin, title assurance and resale service features of "NATIONAL ROYALTIES." Send your address. National P. & R. Company, Box 1214-B, Wichita Falls, Tex.

WANTED — West Texas production. All details in first letter. Write Box C-296, The Oil and Gas Journal, Tulsa, Okla.

MONTANA producing royalties, bargains, odd lots Raymond, Box 1776, Great Falls, Mont.

THESE classified advertisements bring results.

GARVIN COUNTY, OKLAHOMA
10 year one-eighth royalty oil and gas lease for sale. Rental paid to May, 1929. Abstract furnished. Box C-297, The Oil and Gas Journal, Tulsa, Okla.

ABSTRACTORS

WARN ABSTRACT AND TITLE CO. Abstracts of titles to lands in Reeves, Loving and Ward Counties, Pecos, Texas.

In One Month "286 Replies from 129 Cities in 24 States and Canada"

THE OLDS PRESS
215 East Third
Tulsa, Oklahoma

The Oil and Gas Journal,
Want Ad Department,
Tulsa, Oklahoma.

Dear Sirs:

We are writing this letter as we believe you will be interested in these facts.

During January this year we have had requests for our catalog from 286 men or firms in 129 cities in 24 states and Canada.

Many referred to our ad in your Journal and as it is the only ad run thru this period perhaps all should be credited to this source.

We think this is a remarkable thing as this ad has run "as is" except for one line for over 6 years—i. e., "New Catalog Out Now"—the key line.

Yours truly,

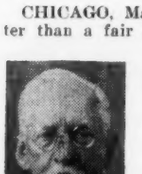
THE OLDS PRESS,
Ben H. Olds.

Better Demand in the Chicago Market

Warm Weather Stimulates Consumption. Price Is Stronger. Kerosene Also Active. Fuel Oils Being Inquired for in Larger Amounts

By J. B. Waldo

CHICAGO, Mar. 12.—There was better than a fair demand for gasoline in the spot market here on Monday. The almost unseasonably warm weather has stimulated buying to some extent and the distributors are having a very good gallonage. The price of U. S. Motor gasoline is strong, several additional refiners and marketers advancing their price on Monday to 6½ cents. There is still some gasoline offered at 6⅜ cents. Only from a limited number of sellers can the 6¼-cent price for immediate orders be secured. The higher gravities are a little stronger and on the 64-66 with a 375 endpoint refiners are asking 7¼ cents.



The kerosene demand was also active on Monday following a good close of the week for this product and the bulk of the business is moving at 4⅜ cents with many asking and selling at 4½ cents.

The furnace oil group is very quiet although no change is made in prices for distillates or zero gas oils.

Fuel Oil Inquiries

Fuel oils are being inquired for in larger amounts and by many buyers some of whom have been out of the fuel oil market for six months. The warmer weather is enabling some of the dealers to supply fuel oils with a 25 degree cold test in place of the zero oils and is giving some ease to the position of those sellers who had sold zero oils and found them scarce. There is no weakening of the prices for refinery fuel oils although considerable quantities of oil from West Texas are being offered here and some sales are reported today.

Gas oils are firmly held with 2½ cents the bottom price for the straightrun product.

The market is encouraged by today's developments as they indicate a larger business to come later in the week.

Bulk Plant Dealers

It has seemed rather strange to have distributors asking what is the matter that refiners do not advance their prices yet this inquiry was made from several localities during last week, more particularly from points where the station prices have been brought back to normal. There is a balance that must be maintained between the costs of any staple commodity and the price to the public if that price to the public is to hold. In practically all lines of industry there are many distributors who are eager for more sales and who, wrongly or rightly, as the individual case may be, figure that they can make more profit on their business by larger sales even if the percentage of profit is less. This is particularly true of the oil industry where the distributor has at many places so wide a margin of profit that cuts in the price to the consumer are almost invited.

The dealer who sells directly from a bulk plant located on a siding is to many oil men a most disturbing factor and there are a good many who reluctantly admit they have been unable to find any adequate reply to his arguments why he should receive the patronage of the motorist. In many instances he uses arguments that are but half truths but made in a very convincing fashion. That they are half truths makes them plausible at least. The present tendency seems to be to try and legislate these distributors out of business just as in many states there are laws proposed to legislate the chain store out of business. The Standard Oil Co. of Ohio has been and is still operating a number of bulk station distributing outlets. The management in one of the cities where the company operated both regular service stations and stations distributing directly from bulk plants located on sidings, charging different prices at the different types of stations, replied to an inquiry how they did it, by stating that they had taken up the matter with their customers and the latter, after a full explanation of the conditions that made it possible to sell at the varied prices, made no objections and in most cases continued to make their purchases at the most convenient station irrespective of price. It is the general public which in the long run decides which plan of distribution it likes the best. There are in all classes many buyers who always try to get the worth of their money and who are chiefly influenced by a price. There are others to whom the price, so long as it is not obviously out of line, is a secondary matter, so the making of any rule of merchandising that will answer for all conditions is almost an impossibility. This is true of the oil industry and for that reason the smaller operator with his more flexible business has a local advantage over the larger organization which must be governed to a great extent by rules which will fit general conditions rather than individual localities.

Gradual Improvement

There was a gradual improvement in the gasoline price situation here last week. The refiners were working slowly but insistently towards higher quotations. Those that had been quoting 6⅛ cents advanced to 6¼ cents while there were two or three who actually quoted 6½ cents and said they were prepared to hold for that price at least for some time as they had little in storage and much business booked ahead. Admittedly a considerable part of this advance business has been taken at prices below the present scale of prices for U. S. Motor gasoline which means that the desirable accounts over the country which buy in the spot market are still taking in gasoline which is billed to them at less than the present market price. This seems to them for that reason to be a good buy but the difficulty is to convince these dealers that the market has really advanced and that they must pay higher prices on their future orders. In some instances these dealers have stated that they were glad to see the market advance but they seem to want to be very sure that their competitor is not securing his material at a lower price.

All the gasoline sold last week to spot buyers was not at the advanced price. In one instance the sales representative of a large Group 3 refinery called a customer, not at a differential point, and told the buyer whom he felt would give him his business at a parity of price, that they were going to advance their quotations the following morning and that their new price would be 6¼ cents. The offer was made to book his order for 5 or 10 cars over March at 6⅛ cents. The favored customer said he could buy at 6 cents and would buy at that price. In reply to some questioning of the quotations the reply was made that the offer had been received that morning, that it was from a reliable Oklahoma refiner and that the gasoline was just as good as that from the salesman's refinery. He also said that the same wire offered him kerosene at 4⅛ cents. Presumably the offer was genuine; at any rate the order was not taken at 6⅛ cents. Who it is that makes these unsettling quotations is not always secret nor why they are made.

Offers by Wire

Another unsettling factor is the offering of material by brokers in the group at slightly less than the prevailing market. These offers are made by wire "collect" and the understanding is that they are sent to any buyer who is willing to pay the cost. Few who receive them stop to think that there is the purchase commission to be added to the cost of the material which will seldom be less than an eighth of a cent a gallon. Still fewer realize that the quantity specified is so small that one order or two at most would take the entire quantity and only a still smaller number realize that many of these messages are based rather on hopes than the material can be covered at the price named than that the material is actually being sold subject to the orders that may pour in for it as a result of these wires. Those who do not know, or knowing do not stop to think, see in these offers a weakening on the part of the refinery market and expect further declines. There have been several concerns in the past who by this method offered goods for sale that they seldom if ever had when they received an order. When this happened, the supply had been just sold out but they had something just or nearly as good to offer. These incidents are mentioned as under present conditions these little things are magnified and become real factors in the situation. When the larger movement in gasolines begins a little later in the season there will be a larger consumption and larger buying from dealers as the result of improved conditions but until that time, these little incidents have considerable weight.

Increased Consumption

Consumption over parts of the territory has been checked to some extent by the softening of the roads. This is more the case in the southern parts of the territory than towards the north where winter conditions still make for somewhat better roads. Traffic is still very largely a matter of the hard-surfaced road mileage. Highway commissioners will not permit the use of heavy trucks on graveled roads as these trucks cut through to the soft underlying clay beneath. Still the dealers report an increase over last year which shows that the conditions complained of are no worse than an average season at least. A little later this increase will be felt materially in the market and at present it is a sustaining factor. The higher gravities have not been locally active, just a sort of routine business. Prices are firm partly as a result of large buying in the Group, stated here to be for export. The 60-62 400 endpoint was quoted last week very generally at 6⅝ cents and the low price for 64-66 375 endpoint was 7 cents. The demand for the 68-70 with a 350-60 endpoint continues to be larger than in past seasons owing to the fact that quite a number of good distributors are finding in this product a motor fuel that sells at substantial premiums and gives the critical motorists a satisfying fuel. The natural gasoline market was less strong but prices show only minor changes.

Ohio Situation

In the differential territories there is still very strong competition for business. Some of the local plants have tried to improve the situation in Ohio by advancing their prices and one large near-by refinery is quoting 9¼ cents delivered at Ohio points. Reports from men in the field state that these prices are not typical of average quotations. One large Group 3 refiner was offered an order for 50 cars of U. S. Motor gasoline at a delivered price which actually figured 5.11 cents Group 3. The offer was not accepted and was placed elsewhere. The present expectation is that the gradual increase in the consumption will take up the surplus that is being pressed on the market from several sources and that better prices will finally result. The fear is that the refinery runs will be so increased that there will be a material addition to available supplies which would make the taking up of the slack more difficult and defer the desired aid of all who have the interest of the industry at heart to stabilize all prices through a higher refinery market. No industry can possibly be permanently prosperous that has the manufacturing division working under such great disadvantages as is the refining industry today.

Kerosene Demand

The kerosene demand has increased and prices are firm. Many of the refiners are today holding for 4⅜ cents and this is the bottom price with an upward tendency. Some are asking 4½ cents or the 41-43 product and state they are making sales at this figure. In some sections plowing has begun on a fairly large scale and some tractors are being operated. From the southern part of this territory there have come calls for rush shipments of kerosene as the dealers state the spring demand is near or already at hand. Stocks are generally not large and occasional delays in making shipments are complained of. There is a better demand for the 42-44 gravity but this is not general. Some refiners report a good movement and others say there is nothing doing with them in this 42-44 product.

It is the fag end of the season in the domestic furnace oil group and the demand is for occasional scattering cars, just what the dealers need to complete their season. Some refiners state they have had a fair business in distillates but generally there is a complaint that the trend of the demand for furnace oils has been away from the distillates towards the heavier grades of gas oils. The domestic burners will be operated for some weeks yet under the most springlike conditions but the quantity of oil used will be individually much decreased from the winter level. Many distributors have sufficient supplies to last them over.

Gas Oils Offered

Gas oils are somewhat more freely offered. While the refiners as a rule are holding firmly to the former quotation of 2½ cents to the large users of straight run gas oil there have been several purchases made at 2⅜ cents of good U.G.I. specification and quite a number of bids made for orders of the smaller gas companies on the basis of 2½ cents have been rejected as too high. This makes the belief quite common that some of the gas companies are being quoted 2⅜ cents or at most a little less than 2½ cents directly by refiners.

There is a fair industrial demand in fact some good business for this class of business has been booked. Most of the tank truck distributors are supplied with stocks or have the oil bought on contract and they care for much of the needs of the smaller users of gas oil for manufacturing as well as heating purposes. There is less activity to the demand for the zero gas oils in any gravity or grade. The consumption for heating is much less and the time is close when users will not pay a premium for the zero oils. Many of the buyers of zero oils are covered for March, and April is not a cold month and in most cases the oil with an ordinary cold test can be handled satisfactorily. In a general way the market for a 32-36 zero oil ranges from 2¾ to 3 cents, according to color, but some of the refiners have ceased to distinguish the straw from the darker grades.

Fuel Oil Inquiries

There were numerous inquiries for fuel oils last week and as many of the users have recently increased their output the quantities named were generally larger. In

(Continued on Page 147)

Eastern Gasoline in Strong Position

Stocks 35 Per Cent Less Than Year Ago. Export U. S. Motor Grade in Cases Advanced ¼ Cent

NEW YORK, Mar. 12.—The upward trend in the eastern gasoline market continued last week when the Standard Oil Co. of New Jersey advanced the export grade of U. S. Motor gasoline one-fourth cent per gallon. The new price in cases is 23.9 cents per gallon.

The advance is a reflection of the fact that refined market conditions so far as gasoline is concerned are improving as the spring and summer demand approaches. It is not commonly predicted that additional advances in both the domestic and export gasoline market will materialize before the first of April.

The domestic gasoline demand from jobbers was fairly active during the past week despite the fact that the East had several days of snowy weather which slowed up the retail demand. Some of the large jobbers are now satisfied that prices will not go lower and they are willing to purchase their storage requirements. The trade generally is expecting the spring retail demand to get under way toward the end of March and this no doubt will be reflected in an active demand from refiners.

The Bureau of Mines report for January, which was released during the past week, throws some light on the present statistical situation of east coast refineries and explains the more optimistic feeling in regard to gasoline.

Gasoline Stocks Low

The following table shows the stocks of gasoline on February 1 at East Coast refineries this year and last. Data in thousands of barrels, except wax, given in thousands of pounds.

	Feb. 1		1928
	1928	1927	Incr'se
Gasoline	5,613	8,466	*2,852
Kerosene	1,463	1,566	103
Gas and fuel oils	10,563	6,242	4,321
Lubricants	2,704	2,684	20
Wax	57,613	83,117	*25,504

*Decrease.

The following table summarizes the East Coast operations from the standpoint of crude oil run to stills and output of the principal refined products. Data are given in thousands of barrels, with the wax given in thousands of pounds.

	Jan.		1928
	1928	1927	Incr'se
Domestic crude to stills	8,948	9,049	*101
Foreign crude to stills	3,719	2,499	1,220
Total crude to stills	12,667	11,548	1,119
Gasoline production	4,152	4,306	*154
Kerosene production	853	861	*8
Fuel and gas oil prod.	6,921	5,604	1,317
Lubricant production	873	774	99
Wax production	19,578	22,268	*2,690

*Decrease.

These two tables largely explain the market situation on the East Coast. In the first place, it will be noted that the East Coast refiners on February 1 had 2,852,000 bbls. less gasoline in storage than they had on the same date of the previous year. This is a reduction of approximately 35 per cent.

The second table on refinery operations shows that while 1,119,000 bbls. more crude oil were run to stills in January of this year than during the same period in 1927, less gasoline was manufactured. This decrease in gasoline yields is explained from the comparative data which show that the East Coast refineries ran 1,220,000 bbls. more foreign crude oil to their stills in January of this year with a small decrease in the use of domestic crude oils.

These data reflect a situation in which the Coastal refiners are using more crude oil from Venezuela fields than they did a year ago. This crude oil is of lower gravity than the average domestic crude oil and they consequently obtain less gasoline per barrel of throughput.

Outlook Encouraging

It is this crude oil situation, coupled with the exceptionally low gasoline stocks, that gives an encouraging gasoline outlook to the gasoline market for the spring and summer.

East Coast refiners and many in other areas are guarding against the accumulation of large gasoline inventories during the winter months. The policy in the past has generally meant that the accumulated gasoline was thrown on the market during the summer months at a loss. Refiners now feel that they have sufficient flexibility in their plant operations to take care of the increased gasoline demand during the summer months without having large inventories to draw on. This should mean that prices will advance more quickly with the coming of the spring season and prevent excess supplies being thrown on the market as has happened in previous years.

Wax Stocks Less

Kerosene and lub oil stocks are about the same this year as last based on the February report. Wax stocks are about 30 per cent less with daily production less. This development in regard to that product is being gradually reflected in prices. Quotations last fall dropped to the point where refiners found it necessary to curtail their output. At the same time they got rid of their surplus stocks and now are in a better position than they have been for over a year.

The developments which have aided gasoline and some other products has not bettered the fuel oil situation. The table shows that January production of East Coast refiners was about 25 per cent greater than a year ago with an increase of 65 per cent in stocks on February 1. The refining of the heavier crudes necessarily increases the percentage output of fuel oil and there are no indications that this condition will be remedied in the near future.

With bunker oil selling on the East Coast 40 cents a barrel under the prevailing quotations of a year ago, the consumption has shown a large increase. This tendency toward increase consumption will no doubt increase and if the crude market is not flooded with the heavier oils, is expected to bring about a gradual improvement in the fuel oil market.

At Atlantic Coast Ports—	Ttl. Mo. Feb.	Ttl. Mo. Jan.	Week End. Mar. 3	Week end. Feb. 25
Baltimore	104,000	477,000	80,000	.....
Boston	.....	94,000	.....	.....
New York	927,000	962,000	313,000	*220,000
Philadelphia	572,000	231,000	78,000	.....
Others	289,000	301,000	.....	.....
Total	1,892,000	2,065,000	471,000	220,000
Daily average	65,241	66,613	67,286	31,429
At Gulf Coast ports	.....	.....	.....	.....
Daily average	.....	.....	.....	.....
Total Atlantic and Gulf Coast ports	1,892,000	2,065,000	471,000	220,000
Daily Average	65,241	66,613	67,286	31,429
Distribution of total California receipts is as follows:				
Crude	544,000	649,000	225,000	.....
Gasoline	1,044,000	881,000	228,000	220,000
Kerosene	95,000	159,000	.....	.....
Gas oil	151,000	368,000	.....	.....
Fuel oil	.....	68,000	.....	.....
Lubricants	58,000	.....	18,000	.....
Total	1,892,000	2,065,000	471,000	220,000

*Revised.

Imports of Petroleum at Principal United States Ports

Imports of crude and refined oils at the principal ports for the month of February totaled 6,315,000 bbls, a daily average of 217,758 bbls., compared with 7,245,000 bbls., a daily average of 233,710 bbls. for the month of January.

Imports for the principal United States ports for the week ended March 3 totaled 933,000 bbls., a daily average of 133,286 bbls., compared with 1,369,000 bbls., a daily average of 195,571 bbls. for the week ended February 25.

At Atlantic Coast ports:	Ttl. Mo. Feb.	Ttl. Mo. Jan.	Wk. End'd Mar. 3	Wk. End'd Feb. 25
Bal imore	197,000	472,000	65,000	.....
Boston	150,000	134,000	.....	74,000
New York	3,137,000	3,337,000	277,000	739,000
Philadelphia	856,000	864,000	210,000	114,000
Others	835,000	1,233,000	142,000	164,000
Total	5,175,000	6,040,000	694,000	1,091,000
Daily average	178,448	193,839	99,143	155,857
At Gulf Coast ports:				
Galveston district	227,000	155,000	65,000	.....
New Orleans and Baton Rouge	641,000	1,008,000	151,000	*211,000
Port Arthur and Sabine district	190,000	.....	.....	67,000
Tampa	82,000	42,000	23,000	.....
Total	1,140,000	1,205,000	239,000	278,000
Daily average	39,319	38,871	34,143	39,714
At all United States ports:				
Total	6,315,000	7,245,000	933,000	1,369,000
Daily average	217,758	233,710	133,286	195,571

*Revised.

Lubricating Oils

The export movement of lubricating oils was heavy during the week. The domestic market has not improved materially. Some trade sources state that the industrial demand has improved. The price list generally is unchanged.

Petroleum Wax

The wax market continues active. The demand is especially strong for the white crude scale grades. Prices were steady during the week.

Kerosene

Sellers report a fair to strong movement of kerosene during the past week. Prices are steady in both the export and domestic markets.

Fuel Oils

Bunker oils are steady at $1.35 per barrel. An occasional new contract is reported. Some contracts are based on the spot market. Those based on a flat price indicate that no price improvement is expected for several months as sellers are willing to take the present price as the basis for the new agreements. The industrial demand for fuel oil showed improvement during the week.

Gas oil prices have not changed. The better grades have the strongest demand.

Receipts of California Oil at Atlantic and Gulf Coast Ports

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the month of February totaled 1,892,000 bbls., a daily average of 65,241 bbls., compared with 2,065,000 bbls., a daily average of 66,613 bbls. for the month of January.

Receipts at Atlantic and Gulf Coast ports for the week ended March 3 totaled 471,000 bbls., a daily average of 67,286 bbls., against 220,000 bbls., a daily average of 31,429 bbls. for the week ended February 25.

Steel Trade Marked By Heavy Production And Fair-Sized Orders

By B. E. V. Luty

PITTSBURGH, Pa., Mar. 12.—Line pipe is recognized as presenting great possibilities this year. It does not follow that this year will easily run ahead of last year in total production of line pipe, for it is recognized that last year was a remarkable line pipe year.

While there are many line pipe projects, almost entirely for natural gas, only a few are actually under inquiry. Of outstanding importance is the inquiry for the line to run from Amarillo, Tex., to Kansas City. This has been actively before the mills and may be closed shortly. It involves 275 miles of 24-inch, 200 miles of 22-inch and 200 miles of various small sizes, making a total of about 125,000 net tons. The two larger sizes can be made by only two or three producers.

Demand for standard or merchant pipe is increasing slightly with the progress of the season. Since the first of the year it has been running substantially as heavy as in the same period of last year, the decrease if any not being over say 5 per cent.

Pipe mill operations are still estimating as averaging about 60 per cent, where they have been since late in January, when the completion of some important line pipe orders decreased the rate. There is now little line pipe business left on books. Pipe mill operations are perhaps in line for a little farther drop unless seasonal increase in general demand or the placing of large orders for line pipe, both of which are probable, turn the affair in the other direction.

Mill prices are being quite well held on both oil country goods and standard pipe. For some time past there has been shading by jobbers in a few sections, which of course is generally met by mills having consigned stocks. Mills assert that jobbers, on account of having had unsatisfactory profits on tubular goods in the past two years, are going to be more assiduous in efforts to maintain prices.

The steel trade as a whole is marked by heavy production and shipments and fair-sized order books, with relatively little new business being booked. This does not mean that prospects are unfavorable for the next few months, it being rather merely a reflection of the large amount of business that was put on books in anticipation of the various price advances that have since been made. In bars, shapes and plates, for instance, which were advanced some three weeks ago from 1.85 to 1.90 cents, it appears that first quarter contracts, made at 1.80 cents, will carry large consumers quite well into the second quarter, so that there will not be much second quarter contracting in those three important lines. In nails the jobbers are pretty well stocked and they also have large deliveries due them at prices below the present market which nominally at least is maintained at $2.65, base, per keg, with the December 1, 1927, list of size extras.

Steel ingot production in January was at 83 per cent of capacity, and estimates of February run as high as 87 per cent, which if verified by the official report would suggest a possibility of 90 per cent this month. The three months would then run a trifle above the same period of last year, but for four successive years March has been the peak month of the year, so that decreases may be expected to begin shortly.

Who's Who in Petroleum Refining

Twenty Leading Companies Have Sufficient Capacity to Supply Present Requirements in United States. Several Important Changes

By C. O. Willson

Ten refining organizations operating 79 plants have 61 per cent of the crude oil capacity of the 312 operating refineries in the United States and 74 per cent of the cracking capacity.

The first 20 companies operating 118 plants have 77 per cent of the crude oil capacity and 85 per cent of the cracking capacity. These first 20 refinery operators, should the necessity arise, could handle all the foreign and domestic crude oil now available with sufficient cracking capacity to assure the maximum yields of gasoline from the raw material.

The foregoing are some of the conclusions arrived at through a study of the data contained in The Oil and Gas Journal's 1928 Survey of Petroleum Refining, which was published complete in the March 1 issue. The survey gave a list of all the operating and shut down refineries by states, including the nature and scope of their operations.

A consideration of the operations of individual companies in this survey clearly shows that for the refining industry as a unit the larger companies are strengthening their positions. This trend, which has been apparent for several years, has gained momentum during the past two years with indications that this condition will continue.

The smaller operators, however, continue as an important factor in the refining industry. Several, in fact, have had a greater growth during the past year or two than their large competitors. In this connection it is well to point out that compared with some of the other major industries, refining in the oil industry is still divided among an exceptionally large number of units. Two organizations in the automobile industry are expected to manufacture more than 50 per cent of the new cars this year. Five concerns are said to control more than one-half of the public utility business in the United States, while one company holds a dominating position in the steel industry.

Table 1 was prepared to show the relative importance of the first 10 and the first 20 organizations in the refining industry of the United States. The data in Table 1 were derived from Table 2, which summarizes the operations of the individual companies.

Importance of Cracking

In ranking the several companies the operations of all subsidiary or closely allied organizations were combined with those of the parent organization. Cracking capacity was added to the crude oil capacity of the individual companies in arriving at a total figure which determined the relative standing of the companies. In the past it has been customary to consider only crude oil capacity in determining the size of a plant. From the standpoint of capital investment and yields of finished products it is obvious that a barrel of cracking capacity is at least as significant as a barrel of crude oil capacity and should be given equal consideration in rating plant operations.

This method of rating had important bearing in determining the position of the companies. For instance the Standard Oil Co. of California has a greater crude oil capacity than does The Texas Corp. The latter corporation, however, has almost three times as much cracking capacity as does the California Standard, so that its combined crude oil and cracking capacity entitles it to third place among the refining organizations. Most of the larger refineries during the past two years have increased their cracking capacity in line with crude oil operations. There are important exceptions to this rule, however, especially on the West Coast where refiners, due to the character of their crude oil supplies and market conditions, have not seen fit to develop their cracking facilities as have the eastern refiners.

First 10 Companies

According to The Oil and Gas Journal's survey previously mentioned, there were 312 refineries operating on March 1 with a combined crude oil capacity of 3,115,580 bbls. daily and a daily cracking capacity of 1,327,584 bbls., or a total of 4,756,414 bbls. combined crude oil and cracking capacity.

Grouping the first 10 companies as was done in Table 2, it was found that the first 10 refinery organizations had 79 of these operating plants. These 79 plants had a rated crude capacity sufficient to handle almost 2,000,000 bbls. of crude oil daily, with close to a 1,000,000-bbl. daily cracking capacity. When the next 10 refinery organizations are added to the list there is an addition of 39 plants, making a total of 118 plants for the first 20 companies.

These first 20 companies have a crude oil capacity of 2,415,300 bbls. daily. This capacity is about 100,000 bbls. daily more than the highest daily average crude oil run to stills of this country, based on government figures. Thus the first 20 companies, as previously stated, have more crude oil capacity than has ever been needed to furnish the supply of refined products in this country. Actually the refineries of the first 10 companies could probably refine all the products needed. The rated crude oil capacity of these first 10 companies is less than the 2,320,000 bbls. daily which was the peak quantity of crude oil run to stills last year. Capacity at refineries, however, is an extremely flexible rating and in most cases the operators could run from 10 to 40 per cent more than capacity if necessary. In many cases this could be done with very little sacrifice in efficiency.

Combining the crude oil and cracking capacities and it will be seen that the first 10 companies have 65 per cent of the total capacity while the first 20 companies have 80 per cent. This leaves approximately 125 companies operating 194 refineries as the remaining 25 per cent.

Five Standard Companies

In the list of 20 leading refinery organizations there are only five companies belonging to the original Standard group. At the time of the dissolution the Standard company had no large competitors and the fact that 15 organizations have become major refinery operators since that time attests to the remarkable growth of the independent industry.

Several of the Standard companies whose names do not appear among the first 20 organizations have not added to their refinery operations in recent years. They have been passed by independent concerns, several of which were unknown in the industry 5 or 10 years ago.

New Jersey Leads

Although outnumbered among the first 20 companies the five Standard representatives as a unit are still the leaders of the industry. Their combined crude oil and cracking capacity is approximately equal to that of the remaining 15 organizations.

The Standard Oil Co. of New Jersey, the major organization of the Standard group, including its subsidiaries, has a comfortable lead over its nearest competitor, the Standard Oil Co. of Indiana. The combined crude oil and cracking capacity of the Standard of NewJ ersey refineries is 779,984 bbls. daily, or approximately 17 per cent of the total for the entire industry in the United States. The New Jersey operations are well balanced as to crude oil and cracking operations.

Outside of the Humble company, very little change has been made in the rated crude oil capacities of the refineries during the past three years. The parent company has directed its efforts toward more efficient operations at its older plants rather than enlarging their crude oil capacity.

The exception to this rule as to capacities has been the Humble Oil & Refining Co. That company has more than doubled its crude oil and cracking capacity during the past year, including the erection of two new skimming plants in West Texas with a third under construction on the Gulf Coast. It is noteworthy that with the exception of the two skimming plants in West Texas belonging to the Humble company, all of the New Jersey refineries are located along the coast. The domestic distribution of the company is largely in the coastal states and its large export trade also makes the coastal refinery locations desirable.

Standard of Indiana

The Standard Oil Co. of Indiana has made important additions to its refinery operations during the past three years, largely through the acquisition of the Pan-American Petroleum & Export Co. and its subsidiaries, including the Mexican Petroleum Corp. Including the plants of the Midwest Refining Co., Utah Oil Refining Co., Mexican Petroleum Corp. and Dixie Oil Co., the company's 11 refineries cover an area extending from the Rocky Mountains to the East Coast. The

TABLE 1—PETROLEUM REFINING IN UNITED STATES

	No. of Plant	Per Cent	Daily Crude Oil Capacity	Per Cent	Daily Cracking Capacity	Per Cent	Crude Oil and Cracking Capacity	Per Cent
Total United States	312		3,115,580		1,327,584		4,443,164	
First 10 companies	79	25	1,928,050	61	981,584	74	2,909,134	65
First 20 companies	118	38	2,415,300	77	1,138,244	85	3,553,044	80

TABLE 2—TWENTY LEADING REFINING ORGANIZATIONS IN UNITED STATES

	No. of Plants	Daily Crude Oil Capacity	Daily Cracking Capacity	Total Crude Oil and Cracking Capacity
First 10 Companies				
1. **Standard Oil Co. of New Jersey:**				
Standard Oil Co. of New Jersey	6	231,000	205,984	434,984
Standard Oil Co. of Louisiana	1	80,000	40,000	120,000
Humble Oil & Refining Co.	4	128,000	95,000	223,000
Total	11	439,000	340,984	779,984
2. **Standard Oil Co. of Indiana:**				
Standard Oil Co. of Indiana	4	84,000	80,000	164,000
Midwest Refining Co.	3	63,000	49,500	112,000
Utah Oil Refining Co.	1	4,500	9,000	13,500
Mexican Petroleum Corp.	2	40,000	.....	40,000
*Dixie Oil Co.	1	2,500	.....	2,500
Total	11	194,000	138,500	332,000
*Under construction.				
3. **The Texas Corporation:**				
The Texas Company	12	134,050	110,100	244,150
California Petroleum Corp.	4	41,000	2,000	43,000
Total	16	175,050	112,100	287,150
4. **Standard Oil Co. of California:**				
Standard Oil Co. of California	3	225,000	41,500	266,500
*Pasotex Petroleum Co.	1	10,000	.....	10,000
Total	4	235,000	41,500	276,500
*Under construction.				
5. **Shell-Roxana:**				
Shell Co. of California	3	107,000	34,500	141,500
Roxana Petroleum Corp.	3	87,000	28,000	115,000
New Orleans Refining Co.	1	10,000	2,000	12,000
Total	7	204,000	64,500	268,500
6. **Standard Oil Co. of New York:**				
Standard Oil Co. of New York	3	37,500	20,000	57,500
General Petroleum Corp.	3	68,000	.....	68,000
Magnolia Petroleum Co.	5	82,000	60,000	142,000
Total	11	187,500	80,000	267,500
7. **Gulf Refining Co.:**				
Gulf Refining Co.	4	182,000	55,000	237,000
8. **Sinclair Refining Co.:**				
Sinclair Refining Co.	6	108,500	95,000	203,500
9. **Tide Water-Associated Oil Co.:**				
Tide Water Oil Co.	1	50,000	7,000	57,000
Associated Oil Co.	2	70,000	.....	70,000
Tidal Refining Co.	1	10,000	3,000	13,000
Tidal Western Oil Co.	1	3,000	.....	3,000
Total	5	133,000	10,000	143,000
10. **Atlantic Refining Co.:**				
Atlantic Refining Co.	4	70,000	44,000	114,000
Total 10 Companies	79	1,928,050	981,584	2,909,134
Second 10 Companies				
11. **Union Oil Co. of California:**				
Union Oil Co. of California	6	97,000	10,000	107,000
12. **Pure Oil Co.:**				
Pure Oil Co.	6	49,500	37,000	86,500
13. **Richfield Oil Co.:**				
Richfield Oil Co.	5	62,000	12,500	74,500
14. **Pan American Refining Co.:**				
Pan American Refining Co.	1	57,500	12,000	69,500
15. **Louisiana Oil Refining Corp.:**				
Louisiana Oil Refining Corp.	2	23,000	10,000	33,000
Beacon Oil Co.	1	18,000	16,500	34,500
Total	3	41,000	26,500	67,500
16. **Mid-Continent Petroleum Corp.:**				
Mid-Continent Petroleum Corp.	1	40,000	12,000	52,000
17. **Cities Service Companies:**				
Empire Oil & Refining Co.	4	20,000	10,300	30,300
Cities Service Refining Co.	1	10,000	2,000	12,000
Crew Levick Co.	2	7,000	1,300	8,300
Total	7	37,000	13,600	50,600
18. **Sun Oil Co.:**				
Sun Oil Co.	3	45,500	4,000	49,500
19. **Marland Refining Co.:**				
Marland Refining Co.	1	27,000	18,000	45,000
20. **Continental Oil Co.:**				
Continental Oil Co.	6	30,750	11,000	41,750
Total Second 10 Companies	39	487,250	156,660	643,910
Total 20 Companies	118	2,415,300	1,138,244	3,553,044

expansion of the Indiana Standard's refineries reflects a somewhat general situation in which the large companies, through the construction of new refineries and the acquisition of properties belonging to other companies, are placing themselves in a position to enlarge their market activities with a minimum of transportation expense. This is particularly important in the case of the Standard companies, each of which for several years following the dissolution of 1911 confined its marketing operations to a certain area.

The Texas Corporation

The Texas Corp., through its merger with the California Petroleum Corp., has strengthened its position as being the organization with the largest number of refineries which were also scattered over the widest area. The corporation now occupies a position similar to that of the original Standard company, in that its products are now available in all parts of the country. The Texas Company has operating refineries in Wyoming, Kentucky, Colorado, Louisiana, Virginia, Pennsylvania, Rhode Island, Illinois, Texas and Oklahoma. To this list has now been added the three California and one Montana refinery of the California Petroleum Corp. The corporation is now in a position to complete its national distribution program on a scale not approached by any other single company.

California Standard

The Standard Oil Co. of California, which ranks fourth in the list of companies, in point of crude oil capacity is only exceeded by the New Jersey Standard. The company has added to its cracking capacity during the past year with additional work under way. The company has given definite indication of its intention to extend the scope of its operations through the building of a refinery at El Paso. This 10,000-bbl. refinery is now under construction and when completed will make the company a factor in the eastern market.

Dutch-Shell

The Dutch-Shell representatives in the United States through a steady growth have become one of the five largest refinery operators. The three companies—Shell, Roxana and New Orleans Refining Co.—are separate in their activities so far as their refinery operations are concerned. However, they could easily be combined should future developments demand such a procedure, so for the purpose of this article their operations are considered as one unit.

Its seven refineries are scattered and well located as to water transportation and accessibility to the important consuming centers. The products of its refineries are now sold over a wider area than most of the other larger refining organizations.

Standard of New York

Through the General Petroleum Corp. and the Magnolia Petroleum Co. the Standard Oil Co. of New York is strongly fortified as a refiner in the major oil area of California and the Mid-Continent, including the Gulf Coast.

The Gulf Refining Co. during the past two years has added to its refining facilities through the building of two new skimming plants at Bayonne, N. J., and Philadelphia. Each of these new plants have a capacity of 25,000 bbls. daily. The capacity of the company's Port Arthur, Tex., refinery has been increased to 125,000 bbls. daily so that it is now the largest single refinery of the industry.

The Sinclair refinery operations have not changed materially during the past two years. The six plants are well located for distribution in the territory east of the Rocky Mountains.

Tide Water-Associated

The merger of the Tide Water Oil Co. and the Associated Oil Co. gives the parent company refineries located in California, Oklahoma, North Texas and New Jersey. The principal expansion of the Atlantic Refining Co. has been in its cracking facilities.

Second 10 Companies

It will be noted in Table 2 that after the first nine companies there is a rapid decline in the refining capacities of the remaining 11 companies. The combined crude oil and cracking capacities of these last 11 companies is approximately equal to that of the Standard Oil Co. of New Jersey.

Several of these smaller companies have more than one refinery. The Pure Oil Co. and Cities Service companies have plants scattered throughout the East and Southwest and the Richfield Oil Co. operates five refineries in California. The Continental Oil Co., for years the Standard's marketing representative in the Rocky Mountain States, is a newcomer in refinery operations. Through the purchase of properties it now has plants in Oklahoma and Texas in addition to plants in the Rocky Mountain States.

BETTER DEMAND IN THE CHICAGO MARKET

(Continued from Page 144)

most of these inquiries the larger quantity will be wanted for April and the following months and does not mean immediate business. In several of these inquiries the buyers asked for quotations covering April, May and June. The outlook for a larger demand is improving the situation and refinery prices are firmly held. April requirements will not be for the most freely flowing material but a good oil is wanted. The spot demand last week improved by a good number of orders from fuel oil distributors for the 28-30 gravity with a low cold test which was needed to supply the heating plants of the larger class of buildings such as hotels, hospitals, stores and apartment houses where considerable heat is required more so by comparison than with the oil-heated home or small apartment building.

One reason for this sudden demand was the slow deliveries that were made by one of the nearer sources of supply. That this was a potent reason is shown by the demand for 18-22 gravity which is also being largely sold by this same refiner. For some reason, probably an excess of orders and slow movement of cars, this refiner is materially behind on many shipments. The Group 3 fuels have held their own as to price and are difficult to buy in any volume. The disturbing factor has been the larger offerings from a number of sources of crude or fuel oil from Texas points. Some of the crudes from Texas have been tried out here and not proven satisfactory but others have been successfully introduced and in some cases they are being freely purchased by large users who have made contracts extending over periods at prices that are very attractive to the buyer providing the oil is satisfactory.

Some 28-30 gravity crude with a rather high cold test and more than the average sulphur content though less than the regular Smackover crude, has been offered and in some cases sold at prices ranging around 75 to 80 cents. There is some Smackover crude fuel oil being offered at prices ranging around 90 cents and some residual oils from Smackover crude at a less price. This last is not generally usable but there are some large concerns that are able to burn the oil satisfactorily. The more of these oils sold in this market the less of the Oklahoma product will be needed. A grade of fuel oil run from McCamey crude has been largely sold. It is 18-22 gravity, zero cold test, 1.70 per cent sulphur. The price was originally 85 cents but it is now offered at 80 cents. It has been and is a large seller. There are some important contracts pending but for the present the most active new business is the spot demand.

Lubricating Oils

Deliveries on contracts make the most active movement in lubricating oils but there is a gradual increase in the number of inquiries and some new business is being placed right along. There is a good deal of talk regarding higher prices for bright stocks but dealers here say the same prices are being quoted and it is just as hard to make a profit on the business as it has been. Those whose business is more in the nature of specials or goods in containers are faring somewhat better than the refiner who sells in tank car lots for compounding or export or any other purpose which permits of bulk buying. Deliveries of spring motor oils to dealers are being made with spring dating when this is necessary.

Tank Wagon Adjustments

The adjustment of tank wagon prices and a gradual bringing of prices back to normal over the territory has continued and slowly but surely the cut-price territories are being reduced to unimportant sections. Of course, there will be some local price cuts but the trade seems to be more reasonable in considering these occurrences than they used to be. The distribution of petroleum products is now such a huge industry, there are so many concerns in it, so many men of different kinds and ways of doing business are active in the management of these concerns that uniformity of method and practice is absolutely impossible. The days of uniformity of price are probably past but this does not mean that there must be a riot of price cutting. Other lines of merchandising have gone through the same experiences and worked out some form of a solution.

There are stores on the leading retail thoroughfares in Chicago which sell the same staple articles at widely differing prices. There are two stores, each very successful and regarded as leaders in their way of doing business. Both are large department stores. One seeks charge accounts, the other sells for cash only. One says little regarding its prices. The other makes its chief appeal for patronage on its low prices. One gives a great deal of service in connection with its business, elaborate waiting rooms, sells as a matter of convenience many items such as theater tickets at no advance in price. The other gives as little service as it does credit beyond selling reliable merchandise and delivering the purchases of its customers promptly. These two stores are from a merchandising standpoint almost at the opposite of the ideas of store management, yet each succeeds.

So many oil men act as if there were but one class of customers. There are many in every community. One oil company experimented with a very out of the way station, a limited number of people around it and only a moderate traffic on the highway on which the station was located. Three grades of gasoline were carried, U. S. Motor, 60-62 400 endpoint and 68-70 350-60. They were greatly surprised at the demand for the highest gravity at 5 cents per gallon above the normal price. The experience was so unexpected that they asked their customers why they bought the more expensive grade and were told they bought it because they believed it paid them to use it. Another oil man when confronted with a cut in price advanced his price a cent a gallon and told his distributors to talk quality of his gasoline. The result was a reputation for quality gasoline that sticks to this day. Individual cases call for individual treatment. Each dealer should realize that his business can only live when it pays him a profit so that when the dealer makes a fight for a price that will pay him he is fighting for not only the immediate profit but the very continuance of his business.

Some dealers drift along just waiting for conditions to improve when they hope to be able to make a profit that will repay them for the losses incurred during the period of waiting. If the dealer cannot make money under the conditions that prevail, how does he know that by waiting he will do better. Conditions may be worse. At any rate there are always periods of good and bad business and the dealer must be able to cope with the bad situations as well as profit when business is at its best.

At several important points in the territory the independent dealers have taken the initiative in advancing the prices. The larger companies have been ready to follow as soon as assured of the permanancy of the prices. The removal of the gasoline tax in Illinois is bringing back the vexing question with the border stations of what to do to prevent motorists in neighboring states from crossing the line for cheap gasoline. At the last session of the Wisconsin Legislature an act was passed permitting the reduction of prices to meet this competition. So far no action has been taken by the Wisconsin Bureau of Markets regarding the situation. Some fear is expressed that if the cut in price is started to compete with stations across the border in Illinois it may spread far beyond the stations located near the southern boundary of Wisconsin.

Post-Office Bids Do Not Point to Higher Gasoline Quotations

CHICAGO, Mar. 10.—Bids for supplying the motor vehicle department of the Chicago postoffice for the quarter beginning April 1 were opened today. As is usual, bids were in two forms, one naming the tank car price f.o b. Group 3, and the other based on tank wagon deliveries. Recent bids have been awarded on the basis of the tank car price. There were only a few bidders.

The bids on a tank car basis were as follows: Seneca Petroleum Co., over April, May and June, .0684 cents with one-half cent added for handling charges and an allowance of one-half of 1 per cent for cash. On the differential basis the same company bid one-eighth cent below the tank car market with a maximum of .684 cents.

The Shaffer Oil & Refining Co. bid .0625 cents over April, .06375 cents over May and .065 cents over June with one-half cent for handling charge and no cash discount. The Commerce Petroleum Co. made a bid on the differential basis of one-eighth cent below the tank car market with a maximum of .08 cents, 1 cent for handling and 1 per cent cash discount. Jewett & Sowers also bid one-eighth cent below the tank car market with one-half cent handling charges and no cash discount.

On the tank wagon delivery basis the Roxana Petroleum Corp. bid 1 cent below the tank wagon price, net. The Seneca Oil Corp. bid 9½ cents flat over the period or 4¾ cents below the tank wagon market with a maximum of 9½ cents and a cash discount of one-half of 1 per cent. The Standard Oil Co. of Indiana bid 10 cents over the period or 4 cents below the tank wagon price with no maximum, net. The Shaffer Oil & Refining Co. bid 9½ cents over the period and made no bid below the tank wagon price. If these bids have any meaning as to the market it would indicate that no important change is expected during the quarter beginning April 1.

MIDLAND TANK FARM FIRE LOSS $780,000

MIDLAND, Tex., Mar. 10.—Five 80,000-bbl. capacity tanks filled with West Texas crude were destroyed by fire when four of the tanks were ignited on the Magnolia Petroleum Co.'s tank farm at Midland during an electrical storm. The fourth tank caught fire several hours later. The loss is estimated to be above $780,000.

One man was severely injured and two others were less seriously hurt by a premature detonation of a cannon being used in an effort to prevent spreading of the flames. Jack Wilson, Atlantic Oil Producing Co., was burned on the face and hands; J. G. McGuire and C. W. Edmonson, Magnolia Petroleum Co., were also burned slightly.

Three of the tanks were reported to be filled with Atlantic Co. oil and the other two were filled with Magnolia company's crude.

There are 17 completed 55,000-bbl. tanks either built or under construction. The Magnolia company ordered 10 more 80,000-bbl. tanks for that farm.

ACQUIRES PROPERTIES

The Texmore Oil & Gas Corp., with general offices in Chicago, announces it has acquired through purchase the entire interest of the Operators Oil Co. in oil and gas properties located in the Pampa Field, Gray County, Texas, and the Artesia Field, Eddy County, New Mexico.

Brief Items for Petroleum Refiners

Wesley I. Nunn to Be Sales Manager of Marland Refining Co.

Effective April 1, Wesley I. Nunn will become manager of tank-car sales of the Marland Refining Co., according to an announcement by C. C. Brown, executive vice president of the Marland companies. Mr. Nunn succeeds Fred D. Applegate, who has resigned after holding the position for several years.

Mr. Nunn at the present time is in charge of the retail marketing department of the Marland Refining Co. He joined the Marland organization several years ago following his graduation from the University of Oklahoma. His first employment was in the advertising department, of which he became the manager.

When the Marland Refining Co. began the rapid expansion of its retail market outlets, Mr. Nunn was transferred to that department and placed in charge. Under his supervision, the bulk and retail outlets have been expanded in several states. Mr. Nunn will continue to make his headquarters at the general offices of the company located in Ponca City.

Mr. Nunn will be succeeded in the retail department by George Woods, who has been assistant manager. Mr. Woods has been connected with the marketing department for several years in various capacities. Mr. Applegate, who retires from the Marland organization, has not announced his future plans.

Mudd Resigns

Joseph B. Mudd, manager of the Chicago division of the Marland Refining Co., has resigned his position effective March 15. Roy Vaughn, who has been local sales manager, will be in charge of the office.

KILLED DURING EXPERIMENT

SHREVEPORT, La., Mar. 10.—While engaged with further experiments with apparatus he had designed to carry out a vapor phase cracking process, Dr. A. J. Edwards, of El Dorado, Ark., was sprayed with flaming oil and died a few hours later. The experimental plant was located on Lion Oil Refining Co.'s enclosure in El Dorado, but was in no way connected with the refinery. Three employes of the Lion plant were injured but not fatally. They were J. H. Whitright, 34, boilermaker's helper; Noel Morgam, 27, chemist; B. W. Campbell, bricklayer, and a negro laborer. Doctor Edwards was recovering from injuries suffered a week ago when the explosion occurred in his experimental plant.

APPOINTED SUPERINTENDENT

HOUSTON, Tex., Mar. 12.—C. M. Johnson, formerly of the Independent Oil & Gas Co., Okmulgee, Okla., is now superintendent of the local refinery of the Crown Central Petroleum Corp. Mr. Johnson succeeds R. Q. Traweek, who recently resigned.

TAX ON GOVERNMENT GASOLINE

WASHINGTON, D. C., Mar. 10.—Whether a state can collect a tax on gasoline sold to the Government when the tax was not included in the price, is being argued before the Supreme Court. The State of Mississippi is attempting to collect such taxes from the Panhandle Oil Co. and the latter is resisting such payment and is questioning the constitutionality of the State to collect the taxes of such circumstances.

NEW OFFICERS OF W.P.R.A. LONG ACTIVE IN REFINING INDUSTRY

E. W. Goebel, president of the Manhattan Oil Co., Kansas City, Mo., and M. L. Grogan, vice president of the Louisiana Oil Refining Corp., Shreveport, La., who are the two new vice presidents of the Western Petroleum Refiners Association, have been identified with the Mid-Continent refining and marketing industry for many years. George D. Locke, vice president of Barnsdall Refineries, Inc., the third vice president of the association, elected at the annual meeting last week, has served the association in that capacity for several years.

Mr. Goebel is one of the first refiners in the Mid-Continent area. His early experience at Oklahoma and Kansas refineries covered the firing of stills and other practical phases of plant operation. He became associated with the Kansas City Refining Co. in later years as an executive in charge of both refining and marketing operations. With associates he was also interested in Kansas production operations.

When the Manhattan Oil Co. was organized three years ago to take over the properties of the Kansas City Refining Co. and other properties, Mr. Goebel was made president of the company and has since continued active in its management. In addition to its producing and pipe line properties in Kansas the company operates a refinery at Kansas City with extensive marketing facilities in several states of the Middle West.

Mr. Grogan's first connection with the Louisiana Oil Refining Corp. was in the

E. W. Goebel, president of the Manhattan Oil Co.

capacity of a sales manager. Previously he had been identified with marketing operations in the Mid-Continent and Middle West. Mr. Grogan is now a vice president and general manager of the Louisiana corporation which has become one of the major refining and marketing organizations with production holdings in Arkansas and Louisiana.

Guests of Realtors

The one-day annual meeting of the Western Petroleum Refiners Association was brought to a close at Kansas City last week with a banquet at which the realtors of that city were hosts to the visiting oil men. An elaborate banquet was served with several musical numbers as entertainment features.

J. C. Nichols, prominent Kansas City realtor, in a well-received address outlined the developments of recent years both in oil and other industries which are increasing the importance of the southwest as an industrial center. Of particular interest to the refiners was his discussion of the developments of the Mis-

M. L. Grogan, vice president and general manager of the Louisiana Oil Refining Corp.

souri River and other inland waterways. He said that this development program when completed would enable the Mid-Continent to compete more evenly with the coastal refineries with their low water rates to consuming centers.

D. W. Moffitt, vice president of the Mid-Continent Petroleum Corp., Tulsa, representing the oil men explained some of the problems with which the oil industry is confronted at this time. He emphasized the need of co-operation in the solution of these problems. A more frendly attitude on the part of the federal Government than has existed in the past would be of great aid to the oil industry, Mr. Moffitt said.

KEENEY TO REPRESENT SHAFFER CO. IN EAST

The Keeney Oil Co., 11 Broadway, New York City, is now the eastern representative of the Shaffer Oil & Refining Co. of Chicago, according to an announcement by the latter company. The Keeney Oil Co. was organized during the past year and is headed by O. P. Keeney, formerly connected with the Tide Water Oil Co. and former president of the National Petroleum Association.

The Keeney company will handle the eastern distribution of the Shaffer products which are refined at the Cushing, Okla., refinery of the company. The Keeney company will continue its other activities as sales and purchasing representatives.

MANAGER REFINERY SALES

CHICAGO, Mar. 10.—P. W. Zumbrook is now the manager of refinery tank car sales for the Chicago division of the Sinclair Refining Co. Mr. Zumbrook has been with the organization for years and until this new appointment was in charge of refinery sales at the Milwaukee office. He succeeds "Jerry" Buck, who has been transferred to the retail sales division.

HOLMES-MANLEY VERSUS DUBBS PROCESS ON TRIAL

NEW YORK, Mar. 12.—The trial of the suit of The Texas Company against the Warner-Quinlan Co. involving the alleged infringement of patents in the operation of a cracking process by the defendant company is now under way in Federal District Court at Newark, N. J. The trial opened March 5 before Judge Runyon.

The suit is based on the operation of the Dubbs cracking process at the Warners, N. J., refinery of the defendant company. The latter company licensed the process from the Universal Oil Products Co. of Chicago, owners of the process which is also in operation at a large number of refineries both in United States and foreign countries. The Universal company is taking an active part in the defense of the case.

The testimony so far introduced indicates that the defense will attack the validity of The Texas Company patents which are the basis for the Holmes-Manley cracking process in operation at several refineries of the company. The defense will also claim priority for its patents.

William F. Hall, of Washington, D. C., of the defense counsel, in his opening statement said that the issues involved in the case were highly important to the independent refining industry. He said these independent companies at present were producing 600,000,000 gallons of gasoline yearly.

Appearing with Mr. Hall as counsel are Thomas G. Haight, of Jersey City, former Circuit Court judge; Alexander F. Reichman, Frank L. Bellknapp and Charles M. Thomas, of Chicago. Counsel for the plaintiff are Nathan L. Miller, Bradley Cole, R. J. Dearborn, Russell Wiles and Drury Cooper of New York City.

DISAGREE ON CONTRACT FOR TEXAS STATE OILS

AUSTIN, Tex., Mar. 10.—The Texas State Board of Control and the State Highway Commission have openly disagreed on the letting of the state refined oil contracts involving purchases aggregating $650,000 from the Pierce Petroleum Corp. The highway commission contends the decision of the board to award the contract to the Pierce Petroleum Corp. was not the result of choosing the lowest and best bid. The Texas Company has been named by the commission as having made a more advantageous bid.

While the Pierce contract is being prepared to be signed, it is possible that a last-minute compromise will result in dividing the purchases, the Pierce Petroleum Co. being given that portion of the contract covered by the lowest bid on certain products and The Texas Company given the other portion. Retail and wholesale purchases of gasoline and lubricants were involved and complicated the complete contract. The board claims to have gone over the differences carefully and the relative differences were weighed in favor of the Pierce Petroleum Corp.

TRANSFERRED TO ST. LOUIS

CHICAGO, Mar. 10.—Robert Ebbert, recently Ohio sales representative of the Roxana Petroleum Co., has been transferred to the St. Louis headquarters, where he will be assistant manager in charge of tank car sales under Sales Manager Woodrough. Mr. Ebbert was formerly with Jewett & Sowers, Chicago.

Natural Gasoline Manufacture

CAPACITY OF CALIFORNIA PLANTS NEAR 1,500,000 GALLONS DAILY

California now has 151 natural gasoline plants with a combined capacity of 1,472,822 gallons daily, according to a survey which has just been completed by the Bureau of Mines. The survey shows that the natural gasoline industry in the western State has had a steady growth during the past year and is next to Oklahoma from the standpoint of capacity.

That the plants are operating near capacity is apparent when the rated capacity is compared with the actual production as reported monthly by the Bureau of Mines. The latest report of the Government covering January operations shows that the output totaled 42,000,000 gallons or 1,322,000 gallons daily. Subtracting the shutdown plants from the total number listed and this actual output is practically the same as the rated capacity.

The Ventura Field of the Los Angeles Basin easily leads all other producing areas in natural gasoline manufacture. The 13 plants operating in that area have a rated capacity of 300,000 gallons daily. Several new plants were built in that field during the past year and important additions were made to plants already operating. The field now has several of the largest plants of the entire natural gasoline industry.

Santa Fe Springs follows the Ventura section as a manufacturer of natural gasoline. This is an older area, although the output of natural gasoline has been steady. Long Beach, Midway and Huntington Beach follow Santa Fe Springs in the order named.

These first five fields furnish 60 per cent of the entire natural gasoline production of California. Of the remaining 16 fields, Seal Beach leads with six plants having a rated capacity of 92,000 gallons daily.

Capacity by Fields

The following table gives the production by fields in California:

California Natural Gasoline Plants

Fields—	No. of Plants	Daily Capacity Gallons
Ventura	13	300,450
Santa Fe Springs	14	174,820
Long Beach	19	166,192
Midway	19	137,525
Huntington Beach	15	128,863
Seal Beach	6	92,000
Dominquez	4	82,285
Coyote Hills	13	77,402
Rosecranz	9	62,370
Richfield	4	61,319
Torrance	6	46,675
Inglewood	5	40,869
Santa Maria	4	23,500
Sunset	6	22,750
Elk Hills Basin	3	18,000
Montebello	3	14,826
Belridge-Lost Hills	4	12,750
Salt Lake	1	5,000
Coalinga	1	4,000
Wheeler Ridge	1	1,000
Newhall	1	226
Total	151	1,472,822

Of the 151 natural gasoline plants listed in the State, 19 are shut down. All of these shutdown plants have small capacity with the exception of one of the Standard Gasoline Co. plants in the Ventura Field. This plant has a capacity of 30,000 gallons daily.

The Standard Gasoline Co. which is owned by the Standard Oil Co. of California has the largest natural gasoline production on the west coast. Its 43 plants, scattered in all the important fields of the State, have a combined capacity of 405,900 gallons daily. This is approximately 30 per cent of the capacity of the entire State. The Standard Gasoline Co. was formed about two years ago when the properties of the Associated Gasoline Co. were taken over by the Standard Oil Co. of California.

The Associated company was the largest manufacturer at that time and when its plants were combined with those of the Standard company, which was also a large manufacturer, its total output was approximately double that of any other company. The bulk of the Standard natural gasoline output is absorbed at the company's California refineries.

The Shell Co. of California is next to the Standard company as a manufacturer of natural gasoline. Other large manufacturers in California are Union Oil Co., California Gasoline Co., Richfield Oil Co., General Petroleum Corp. and Petroleum Securities Co.

APPLIED COMMON SENSE IN SAFETY

The following suggestions as to safety in natural gasoline plants is taken from Gas Department Bulletin of the Pan American Petroleum Co.-Petroleum Securities Co.:

Back Strains—In lifting heavy material and equipment, use great care to take slow lifts, keeping the back as nearly as possible in a vertical position, lifting with your legs. Back strains are very serious and often cause long lay-offs. One of our men recently lost 41 days from a strain.

Air Hose—When air hose must be used about the plant, be sure all hose connections are secure before putting into operation or turning on the air. In many cases air hose connections have been known to give way uder the air pressure. There is great danger that the hose may whip around and seriously injure some one. This precaution will also apply to steam, water, or any other kind of hose used under pressure.

Ladders—Never use old, rickety, broken ladders. Many serious falls have occurred owing to faulty ladders giving way. Always be sure that the ladder has a secure footing, or, if possible, have someone stationed at the foot—especially where a long ladder is used.

Gasoline Burns—Gasoline soaked clothing should be removed immediately. Not only is there danger of this clothing catching fire, but there is a great danger to the skin which will become inflamed. A serious burn will often result from contact with gasoline saturated clothing. This is important; do not neglect it.

Nails, Walkways, Holes, Etc.—Keep all walkways and driveways clear of obstructions. Holes and open pipe trenches should be covered—especially at night. Slipping, falling, tripping, etc., cause many accidents. Never leave a nail sticking out in a board; the next man may step on it and suffer serious injury.

Tools—Never work with faulty tools. When working with tools see that they have a good bite before applying pressure. Keep your feet out from under heavy pipe wrenches or tongs. Faulty tools should be turned in for repair at once. Your foreman should see that they are repaired or replaced.

Safety is better than compensation. The best safety device is a careful worker; use your head and think before you act. We may not prevent all accidents, but we can go a long way towards preventing any type of accident happening a second time.

Learn **First Aid.** A knowledge of First Aid may come in handy some time—at least, it will do us no harm.

INSULATED TANK CARS HAVE NEW FEATURES

The natural gasoline division of the Empire Oil & Refining Co. has placed 100 new insulated tank cars in service, which have numerous features to facilitate safety and decrease evaporation losses. The Doherty News describes these as conforming to I.C.C. specifications No. 104. Each has a capacity of 8,100 gallons each.

The tanks are anchored to the center sills by riveted channels along the bottom and are covered by two 1-inch layers of hairfelt insulation protected by a one-eighth-inch steel jacket extending over the complete tank and dome. This arrangement keeps the contents of the tank cars cool by insulating from the heat of the sun's rays and also the atmospheric temperature when the latter is above that at which the contents are when loaded into the car.

Due to its ability to resist leakage and also because of its self-grinding, self-locking features, a special outlet valve is installed in the bottom of these new cars. An added feature is that the entire valve assembly can be unscrewed from the top of the outlet leg and removed for repairs, which are infrequent.

The new features are in the domes of the cars. Two 2-inch pipes with lock stopcocks are installed in the dome, one being a vent line from the dome only, while the other has a 2-inch pipe extending to within 1 inch of the bottom of the car. This is used for loading and at times for unloading. These two connections are set in a heavy cast iron frame on the dome and when closing the car heavy bell-shaped iron covers screw into the cast iron frame protecting the pipe connection and stopcock from damage and tampering. These bell-shaped covers can be sealed in place.

Vapor

The new dome covers are of the bolted type and have a safety catch to prevent the removal of the cover before releasing pressure on the car by venting at the

(Continued on Page 159)

PHILLIPS PETROLEUM OPENS BULK STATION

Col. Arthur Goebel, the first to use the Phillips Petroleum Co.'s aviation gasoline in public tests and winner of the Dole prize flight from San Francisco to Honolulu, was the first to be served from the company's new bulk station at Amarillo, Tex. He "happened in" on his way to the west coast and, seeing the station near the grounds, arranged that he be supplied.

While the formal opening of the station was set for March 10, employes were able to meet the request and the ship was refueled. This is the fifth city in which the company has located bulk and service stations, other locations being made at Wichita, Kans., Salina, Kans., Topeka, Kans., and Bartlesville, Okla. These were opened during November and December of last year.

CALIFORNIA STOCKS OF NATURAL GASOLINE LESS

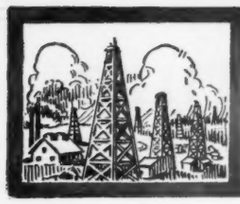
The 135 casinghead plants which were operating in California during the month of January treated 26,778,762,000 feet of natural gas and affected a total natural-gas gasoline recovery of 41,976,353 gallons. As would naturally be expected, the absorption method accounted for the greater part of the total amount of natural gas treated and this process was likewise the most efficient as far as the total casinghead recovery per 1,000 feet of gas treated is concerned. The 16,824,594,000 feet of natural gas charged to oil absorption plants yielded 26,974,569 gallons of natural-gas gasoline, a recovery of 1.60 gallons of gasoline for each 1,000 feet of gas treated. The combination compressor and oil absorption plants required 9,695,597,000 feet of natural gas, from which 14,641,977 gallons of casinghead were produced. This is at the rate of 1.51 gallons per 1,000 feet of gas treated. Compressor plants handled 258,571,000 feet of gas and this method only produced a total of 327,168 gallons of casinghead, or a little over 1.26 gallons for each 1,000 feet of gas treated.

The total production of natural-gas gasoline in California during the month of January was 999,437 bbls., of which 212,395 bbls. were mixed with crude or unfinished oils in order to facilitate pipe line movement to refineries and 911,243 bbls. blended with straightrun gasoline to increase volatility or improve its quality. Independent casinghead plant operators held a total of 31,228 bbls. of natural-gas gasoline at the close of the month, while refiners had 499,813 bbls. in storage on January 31. The total amount of casinghead in storage at the end of the past month represents a little over 14 days supply at the current rate of consumption.

PRODUCTION—CALIFORNIA NATURAL GASOLINE—JANUARY, 1928

Type of Plant—	Gas Treated M.C.F.	Natural-Gas Gasoline Produced (Gallons)	Gasoline Recovery per M.C.F. Gas Treated
Oil absorption	16,824,594	26,974,569	1.603
Compressor	258,571	327,168	1.265
Combination compressor and oil absorption	9,695,597	14,641,977	1.510
Drip	.....	32,639	.....
Totals	26,778,762	41,976,353	1.568

Finished gasoline produced at plants, 23,142 bbls. Distribution—	Bbls.	Bbls.
Stocks first of month	.....	699,216
Production during month	.....	999,437
Quantity mixed with crude or unfinished oils	212,395	.....
Used in blending at refineries	911,243	.....
Stocks end of month	531,041	.....
Used at plants, shortage and evaporation losses	6,205	.....
Balance	.....	61,231
	1,659,884 Gals.	1,659,884 or Bbls.
Natural-gas gasoline held by natural-gas gasoline plant operators	1,311,565	31,228
Natural-gas gasoline held by refiners	20,992,146	499,813
Totals	22,303,711	531,041
Finished gasoline (motor fuel) held by natural-gas gasoline plant operators	.....	8



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Mar. 13		Mar. 6		Feb. 28	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.05¾		.05⅝	.05¾	.05½	
56-58 450 endpoint	.05¾		.05⅝	.05¾	.05½	
58-60 450 endpoint	.05¾	.05⅞	.05¾		.05¾	
*58-60 437 endpoint (U. S. Motor)	.06268		.06178		.06168	
*60-62 437 endpoint	.06619		.06597		.06423	
*60-62 400 endpoint	.06875		.06674		.06705	
*64-66 375 endpoint	.07250		.07125		.07170	
68-70 360 endpoint	.07¼		.07¼		.07¼	
64-66 437 endpoint (blend)	.06¼		.06⅛	.06¼	.06⅛	.06¼

*Weighted average prices March 12 as reported by representative refiners.

Sales to jobbers only.						
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.06¼	.06½	.06¼	.06⅜	.06¼	.06⅜
NORTH TEXAS—						
56-58 450 endpoint	.05⅝	.05¾	.05⅝		.05½	
58-60 450 endpoint	.05⅝	.05¾	.05⅝		.05½	
58-60 437 endpoint (U. S. Motor)	.06⅛		.06	.06¼	.06	.06¼
60-62 400 endpoint	.06½		.06⅜	.06½	.06⅜	.06½
64-66 390 endpoint	.06⅝		.06½	.06⅝	.06⅝	
64-66 375 endpoint	.06¾		.06¾		.06¾	.07
68-70 360 endpoint	.07	.07⅛	.07		.07	.07¼
64-66 437 endpoint (blend)	.06⅛		.06⅛		.06⅛	.06¼
NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.06½	.06¾	.06⅜	.06½	.06⅜	.06½
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06½		.06½		.06½	
PENNSYLVANIA—						
52-54 Naphtha	.07¾	.08	.07½	.07¾	.07½	.07¾
54-56 Naphtha	.07¾	.08	.07½	.07¾	.07½	.07¾
58-60 Gasoline	.08	.08¼	.07¾	.08	.07¾	.08
60 Gasoline	.08¼	.08¾	.08	.08¼	.08	.08¼
62 Gasoline	.08¾	.09	.08½	.08¾	.08½	.08¾
64 Gasoline	.09	.09¼	.09	.09¼	.09	.09¼
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.08	.08½	.08	.08½	.08	.08½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.05⅝	.05¾	.05¾		.05½	.05⅝
56-58 450 endpoint	.05¾	.05¾	.05¾		.05⅝	.05¾
58-60 437 endpoint (U. S. Motor)	.06¼	.06¾	.06¼		.06⅛	.06¼
60-62 400 endpoint	.06½	.06⅝	.06½	.06⅝	.06½	.06⅝
64-66 375 endpoint	.07	.07⅛	.07		.07	.07⅛
68-70 360 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
64-66 437 endpoint (blend)	.06¼	.06⅜	.06¼	.06⅜	.06⅛	.06¼

NATURAL GASOLINE

	Mar. 13		Mar. 6		Feb. 28	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.05	.05¼	.05½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04⅞	.05	.05		.05¾	.05½
Grade B, 76-83.9, 375 e.p., rec. %	.04	.04⅛	.04⅛		.04½	
Grade BB, 84.92, 375 e.p., rec. 85%	.04		.04	.04⅛	.04¼	.04⅜
Grade C, 80-92, 375 e.p., rec. 78%	.03¾	.03⅞	.03⅞	.04	.04⅛	.04¼
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.05		.05½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04⅞		.05		.05¾	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04	.04⅛	.04⅛		.04½	
Grade BB, 84.92, 375 e.p., rec. 85%	.04		.04	.04⅛	.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.03¾		.04		.04¼	
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.05¼		.05¼	.05⅜	.05⅝	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¼		.04¼	.04½	.04¾	.04⅞
Grade C, 80-92, 375 e p., rec. 78%	.04	.04⅛	.04¼		.04½	.04⅝
CALIFORNIA—						
75-85, 375, 390 endpoint	.07½	.08½	.07		.07	.07½
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.05	.05⅛	.05½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04⅞		.05		.05⅝	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04	.04⅛	.04⅛		.04½	
Grade BB, 84-92, 375 e.p., rec. 85%	.04		.04⅛		.04¼	.04⅜
Grade C, 80-90, 375 e.p., rec. 78%	.03¾	.03⅞	.04		.04⅛	

BURNING OIL

	Mar. 13		Mar. 6		Feb. 28	
KANSAS—						
41-43 water white Kerosene	.04½	.04⅝	.04⅜	.04½	.04⅜	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04¼	.04½	.04¼		.04⅛	.04¼
42-44 water white Kerosene	.04¾	.04⅞	.04¾		.04⅝	
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
NORTH TEXAS—						
41-43 water white Kerosene	.04¼	.04¾	.04¼		.04¼	
40-42 water white Kerosene	.04⅛	.04¼	.04	.04⅛	.04	.04⅛
ARKANSAS—						
41-43 water white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
PENNSYLVANIA—						
43 Kerosene prime white	.05¾	.06	.05¾	.06	.05¾	.06
45 Kerosene water white	.06	.06¼	.06	.06¼	.06	.06¼
46 Kerosene water white	.06¼	.06½	.06¼	.06½	.06¼	.06½
47 Kerosene water white	.06¾	.06⅞	.06½	.06¾	.06½	.06¾
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
38-40 water white Kero. (high-burning test)	.05½	.06	.05¼	.06	.05¼	.06
Engine distillate, 43-45, 445 endpoint	.06½	.07	.06½	.07	.06½	.07
Engine distillate, 42-44, 480 endpoint	.06¼	.06¾	.06¼	.06¾	.06¼	.03¾
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04⅜	.04¼	.04¼		.04¼	
42-44 water white Kerosene	.04¾		.04⅝	.04¾	.04⅝	.04¾

FUEL OILS

	Mar. 13		Mar. 6		Feb. 28	
KANSAS—						
18-20 Fuel Oil, per bbl.	.85	.87½	.85	.87½	.87½	
22-26 Fuel Oil, per bbl.	.90		.90		.90	
32-36 Gas Oil	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
38-40 Distillate	.03⅛		.03⅛		.03⅛	.03¼
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.77½	.80	.75	.80	.75	.80
18-22 Fuel Oil, per bbl.	.82½	.85	.82½	.85	.82½	.85
22-26 Fuel Oil, per bbl.	.85		.85		.85	
24-26 Fuel Oil, per bbl.	.85	.87½	.85	.87½	.85	.87½
26-30 Fuel Oil, per bbl.	.87½	.90	.87½	.90	.87½	.90
28-30 Fuel Oil, per bbl.	.92½		.92½		.92½	
32-36 Gas Oil (dark)	.02½		.02½		.02½	
32-36 Gas Oil (straw distillate)	.02⅝		.02⅝		.02⅝	
36-38 Distillate	.03		.03		.03	
38-40 Straw Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars), per bbl.	.75	.80	.75	.80	.80	.85
32-36 Gas Oil (straw)	.02⅝		.02⅝		.02⅝	
38-40 Straw Distillate	.03		.03		.03	
NORTH LOUISIANA—						
18-20 Fuel Oil, per bbl.	.97½	1.00	.97½	1.00	.97½	1.00
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03¼
ARKANSAS—						
33-36 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
32-36 Gas Oil (straw)	.02¾		.02¾		.02¾	
16-22 Refinery Fuel Oil, per bbl.	.85	.90	.90	.92½	.92½	.95
GULF COAST (South Texas)—						
Gas Oil	.04¼	.04½	.04¼	.04½	.04¼	.04½
Fuel Oil, per bbl.	1.20	1.25	1.25		1.25	
PENNSYLVANIA—						
30-34 Fuel Oil	.04¾	.05	.04¾	.05	.04¾	.05
36-40 Fuel Oil	.05	.05¼	.05	.05¼	.05	.05¼
CALIFORNIA—						
33-36 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
27-32 Distillate	.02½	.03	.02½	.03	.02½	.03
*15-20 Fuel Oil, Bunker (at tide water)	.85	1.00	.85	1.00	.85	1.00
15-20 Fuel Oil (cargo lots), per bbl.	.75	.85	.75	.85	.75	.85
27 plus Diesel, per bbl.	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3, bbl.	.85	.90	.87½	.90	.85	.90
22-26 Fuel Oil (sellers' cars) Group 3, bbl.	.85	.87½	.85	.87½	.82½	.87½
18-22 (Group 3), per bbl.	.82½	.85	.82½	.85	.82½	.85
16-20 Smackover, per bbl.	.90	.92½	.90	.95	.92½	.97½
32-36 Gas Oil (zero)	.02¾	.02⅞	.02¾	.02⅞	.02¾	.03
32-36 Gas Oil (industrial)	.02½	.02⅝	.02½	.02⅝	.02⅝	
36-38 Distillate	.03	.03¼	.03	.03¼	.03	.03¼
38-40 Straw Distillate	.03¼	.03¼	.03¼		.03¼	.03⅜

*Bunkers.

LUBRICATING OIL AND WAX

	Mar. 13		Mar. 6		Feb. 28	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
100 vis., 3 color, 20-25 cold test	.06	.06¼	.06	.06¼	06	.06¼
150 vis., 3 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.08	.08¼	.08	.08¼	.08	.08¼
180 vis., 3 color, 23-28 cold test	.09⅜	.10	.09⅜	.10	.09⅜	.10
180 vis., 4 color, 23-28 cold test	.09¼	.09¾	.09¼	.09¾	.09¼	.09¾
180 vis., 5 color, 23-28 cold test	.09¼	.09½	.09⅛	.09½	.09¼	.09½
200 vis., 3 color, 23-28 cold test	.09½	.10½	.09½	.10½	.09½	.10½
200 vis., 4 color, 23-28 cold test	.09⅜	.10¼	.09⅜	.10¼	.09⅜	.10¼
200 vis., 5 color, 23-28 cold test	.09¼	.10	.09¼	.10	.09¼	.10
240 vis., 3 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
240 vis., 4 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
280 vis., 3 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
280 vis., 5 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
Cylinder Stocks:						
600, steam refined, light green	.08	.09	.08	.09	.08	.09
600, steam refined, dark green	.06¼	.06¾	.06¼	.06¾	.06¼	.06¾
190-200 vis. @ 210 Bright Stock	.30	.32	.30	.32	.30	.32
150-160 vis. @ 210 Bright Stock	.22	.24	.23	.24	.23	.25
Waxes:						
124-126 White Crude Scale Wax	.03	.03⅛	.03		.03	
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom	.07¾	.08	.07¾	.08	.07¾	.08
36 Miners' Neutral	.06½	.06¾	.06½	.06¾	.06½	.06¾
150, 3 color	.27	.27½	.27	.27½	.27	.27½
180, 3 color	.30½	.31	.30	.30½	.30	.30½
200, 3 color	.33	.33½	.33	.33½	.33	.33½
220, 3 color	.35	.35½	.34½	.35	.34½	.35
600, steam refined	.09¼	.09½	.09¼	.09½	.09¼	.09½
635, steam refined	.10¼	.10½	.10¼	.10½	.10¼	.10½
650, steam refined	.11½	.12	.10¾	.11¼	.10¾	.11¼
600, Pennsylvania flash	.15	.16	.15	.16	.15	.16
*550, E filtered	.15½	.15¾	.15	.15½	.15	.15½
*600, E filtered	.15½	.16	.15½	.16	.15½	.16
600, E filtered	.15¼	.15¾	.15¼	.15¾	.15¼	.15¾
600, D filtered	.23½	.24	.23½	.24	.23½	.24
550, E filtered	.15½	.16	.15½	.16	.15½	.16
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.27	.27½	.27	.27½	.27	.27½
†122-124 White Crude Scale Wax	.03⅛	.03¼	.03	.03⅛	.03⅛	.03¼
124-126 White Crude Scale Wax	.03⅛	.03¼	.03⅛		.03⅛	.03¾

*At Warren, Pa. †At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.07½	.08	.06½	.07½	.06½	.07½
No. 3 color, 200 vis., pale oil	.07½	.08½	.09	.09½	.09	.09½
No. 3 color, 300 vis., pale oil	.08½	.09½	.10½	.11½	.10½	.11½
No. 3½ color, 500 vis., pale oil	.12	.13	.12	.13	.12	.13
No. 4 color, 750 vis., pale oil	.14	.15	.14	.15	.14	.15
No. 5 to 6 color, 200 vis., red oil	.07½	.08	.07½	.08	.07½	.08
No. 5 to 6 color, 300 vis., red oil	.08½	.09	.08½	.09	.08½	.09
No. 5 to 6 color, 500 vis., red oil	.09½	.10½	.09½	.10½	.09½	.10½
No. 5 to 6 color, 750 vis., red oil	.12	.12½	.12	.12½	.12	.12½
No. 2½ color, 200 vis., pale filtered	.11½	.12	.11½	.12	.11½	.12
No. 2½ color, 300 vis., pale filtered	.13	.13½	.13	.13½	.13	.13½
No. 2½ color, 500 vis., pale filtered	.14	.15	.14	.15	.14	.15
No. 2½-3 color, 750 vis., pale filtered	.17½	.19	.17½	.19	.17½	.19

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

CALIFORNIA—						
130 vis., 2½-3 color	.09	.10	.09	.10	.09	.10
200 vis., 2½-3 color	.10	.10½	.10	.10½	.10	.10½
300 vis., 3-3½ color	.10½	.11	.10½	.11	.10½	.11
350 vis., 3½-4 color	.11	.12	.11	.12	.11	.12
400 vis., 3½-4 color	.13	.14	.13	.14	.13	.14
Red Neutral:						
200 vis., 4½-5 color	.08½	.09	.08½	.09	.08½	.09
300 vis., 5-6 color	.09	.09½	.09	.09½	.09	.09½
400 vis., 5-6 color	.11	.11½	.11	.11½	.11	.11½
500 vis., 4½-5 color	.11½	.12	.11½	.12	.11½	.12
500 vis., 5-6½ color	.11	.11½	.11	.11½	.11	.11½
600 vis., 6 plus color	.12	.12½	.12	.12½	.12	.12½

Note: Bright Stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Mar. 13	Mar. 6	Feb. 28
Gasoline, U. S. Motor, 58-60 437	.08½	.08½	.08¼
Kerosene, water white, 41-43	.07½	.07½	.07½
*Fuel Oil, bunker "C," 14-16, per bbl.	1.35	1.35	1.35
*Fuel Oil, Diesel, 28-30, per bbl.	2.00	2.00	2.00
Gas Oil, 28 plus	.05¼	.05¼	.05¼
25 pale Paraffin Oil	.12	.12	.12
28 pale Paraffin Oil	.07	.07	.07
285 red Paraffin Oil	.11½	.11½	.11½
250 red Paraffin Oil	.10½	.10½	.10½
225 red Paraffin Oil	.09½	.09½	.09½
200 red Paraffin Oil	.09	.09	.09
Refined Wax:			
120-122 a.m.p., per lb.	.04	.04	.04
125-127 a.m.p., per lb.	.04¼	.04¼	.04¼
130-132 a.m.p., per lb.	.04¾	.04¾	.04¾
135-137 a.m.p., per lb.	.05½	.05½	.05½
Petrolatum, in bbls., carload lots, per lb.:			
Dark green	.02	.02	.02
Amber	.03⅜	.03⅜	.03⅜
Extra amber	.03¾	.03¾	.03¾
Cream	.06½	.06½	.06½
Lily White	.08⅜	.08⅜	.08⅜
Snow white	.09⅜	.09⅜	.09⅜

*Lighterage, 6.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Mar. 13	Mar. 6	Feb. 28
Gasoline, U. S. Motor, 58-60 437, in cases	.2390	.2365	.2365
Kerosene, standard white, in cases	.1690	.1690	.1690
Kerosene, water white, in cases	.1790	.1790	.1790
600, steam refined cylinder stock, in bbls.	.17	.17	.17
635, steam refined	.19	.19	.19
650, steam refined	.20	.20	.20
600, Pennsylvania flash	.23	.23	.23
630, Pennsylvania flash	.35	.35	.35
600, Warren E	.25	.25	.25
600, Oil City E	.24	.24	.24
Light 135 Bright Stock	.40	.40	.40
Dark 135 Bright Stock	.38	.38	.38

LOS ANGELES EXPORT PRICES

	Mar. 13	Mar. 6	Feb. 28
Kerosene, water white	.04¾ .05	.04¾ .05	.04¾ .05
U. S. Motor Gasoline, 53-55 437 e.p.	.06¼ .06½	.06¼ .06½	.06¼ .06½

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927) $1.00
Other fields ....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE
Carson and Hutchinson

Below 31 gravity	$ .60
31-31.9	.65
32-32.9	.70
33-33.9	.73
34-34.9	.76
35-35.9	.79
36-36.9	.82
37-37.9	.85
38-38.9	.88
39-39.9	.91
40-40.9	.94
41-41.9	.97
42-42.9	1.00
43-43.9	1.03
44 and above	1.06

Wheeler County

Below 29 gravity	$ .60
29-29.9	.65
30-30.9	.70
31-31.9	.75
32-32.9	.80
33-33.9	.83
34-34.9	.86
35-35.9	.89
36-36.9	.92
37-37.9	.95
38-38.9	.98
39-39.9	1.01
40-40.9	1.04
41-41.9	1.07
42-42.9	1.10
43-43.9	1.13
44 and above	1.16
Gray County	....See gravity table

Humble Oil & Refining Co. Magnolia Petroleum Co. February 21.

*Iatan	Same as North Texas
Crane-Upton-Crockett	See gravity table
†Glasscock	.60
†Chalk	.80

*Includes Howard County and Westbrook Fields. Marland Refining Co. pays $1.05 for Howard County crude, effective May 21.
†Magnolia Petroleum Co., Jan. 14, 1928.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (Feb. 7, 1928)	$ .75
Bellevue (Feb. 24, 1927)	1.20
Urania (Nov. 18, 1927)	.75
East El Dorado (March 16, 1927)	1.00
Other fields	....See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Gulf Refining Co. and Magnolia Petroleum Co.; (Magnolia Petroleum Co. posted Cotton Valley February 8); Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co., Gulf Refining Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

†Grade A (March 14)	$1.20
Grade B	....See gravity table
*Jennings, La. (March 14)	$1.05
†Saratoga, Batson, Daytona (March 14, 1927)	$1.20
§Markham (March 14)	1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. §The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5)	$1.00
†Mirando (March 14)	1.00
Rockdale-Minerva (April 15):	
Below 38 gravity	1.25
38-38.9 gravity	1.27
39-39.9 gravity	1.29
40 and above	1.31

(Continued on Page 152)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla., Kans., N. C. Tex.	2 No. La. and Arkansas	3 Smackover, Ark.	4 Stephens, Ark	5 Gray County (Texas Panhandle)	6 Crane, Upton, Pecos, Crockett, Winkler Counties (West Texas)	7 Salt Creek, Wyo.	8 Grade B & Light Crude (G. Coast)	9 Somerset (South Central Texas)
24 and above	....	....	.90	....	....	....	....	....	....
Below 24	.76	....	.75	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	....	1.15	....
24 to 24.9	.76	....	....	....	....	....	....	....	....
25 to 25.9	.81	....	....	....	....	....	....	....	....
Below 26	....	....	....	....	.60	.60	....	....	....
26 to 26.9	.86	....	....	....	.60	.60	....	1.19	....
27 to 27.9	.91	....	....	....	.65	.60	....	1.21	....
Below 28	....	.91	....	.85	....	....	....	....	....
28 to 28.9	.96	.96	....	.87	.70	.60	....	1.23	....
29 to 29.9	1.01	1.01	....	.89	.75	.60	1.01	1.25	....
30 to 30.9	1.06	1.06	....	.91	.80	.60	1.06	1.27	....
31 to 31.9	1.11	1.11	....	.93	.85	.60	1.11	1.29	....
32 to 32.9	1.16	1.16	....	.95	.90	.60	1.16	1.31	1.05
33 to 33.9	1.19	1.19	....	....	.93	.60	1.19	1.33	1.07
34 to 34.9	1.22	1.22	....	....	.96	.60	1.22	1.35	1.09
35 to 35.9	1.25	1.25	....	....	.99	.60	1.25	1.37	1.11
36 to 36.9	1.28	1.28	....	....	1.02	.60	1.28	....	1.13
37 to 37.9	1.31	1.31	....	....	1.05	....	1.31	....	1.15
38 to 38.9	1.34	1.34	....	....	1.08	....	....	....	1.17
39 to 39.9	1.37	1.37	....	....	1.11	....	....	....	....
40 to 40.9	1.40	1.40	....	....	1.14	....	....	....	....
41 to 41.9	1.43	1.43	....	....	1.17	....	....	....	....
42 to 42.9	1.46	1.46	....	....	1.20	....	....	....	....
43 to 43.9	1.49	1.49	....	....	1.23	....	....	....	....
44 to 44.9	1.52	1.52	....	....	1.26	....	....	....	....
45 to 45.9	1.55	1.55	....	....	....	....	....	....	....
46 to 46.9	1.58	1.58	....	....	....	....	....	....	....
47 to 47.9	1.61	1.61	....	....	....	....	....	....	....
48 to 48.9	1.64	1.64	....	....	....	....	....	....	....
49 to 49.9	1.67	1.67	....	....	....	....	....	....	....
50 to 50.9	1.70	1.70	....	....	....	....	....	....	....
51 to 51.9	1.73	1.73	....	....	....	....	....	....	....
52 and above	1.76	1.76	....	....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted schedule February 21, 1928, making price below 30 gravity $.75 per barrel, 30-30.9 gravity $.90 and 31-31.9 gravity $1.05, with 3 cents increase per degree higher in gravity, taking 32-32.9 gravity at $1.16 as basis, with a top price of $1.76 for 52 and above.

Humble Oil Refining Co. posted $1.52 on all oil 44 gravity and above.

Oklahoma—Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., Carter Oil Co., The Texas Company, February 21.

North Central Texas—[Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only. Iatan posted a flat price of $.93 by Magnolia on January 14, 1928). Currie, Nocona, Moran and Corsicana light]; Texas, Prairie, Sinclair and Gulf; The Texas Company, Humble Oil & Refining Co., February 21.

Kansas—Prairie, Sinclair; Carter, The Texas Company, February 21.

Column 2—Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, De Soto, Haynesville, Homer and El Dorado only]; Standard Oil Co. of Louisiana, Texas Pipe Line Co., Louisiana Oil Refining Co., February 21 and Magnolia Petroleum Co. February 23.

Column 3—February 6, Louisiana Oil Refining Co. February 7, Standard Oil Co. of Louisiana, The Texas Company, Gulf Refining Co., Magnolia Petroleum Co. February 8, and Atlantic Production Co. February 10.

Column 4—Atlantic Oil Producing Co., Louisiana Oil Refining Corp., The Texas Company, February 22.

Column 5—Humble Oil & Refining Co., Magonlia Petroleum Co., February 21.

Column 6—Humble Oil & Refining Co., August 23; Marland Refining Co., Magnolia Petroleum Co., and Gulf Pipe Line Co., August 24.

Column 7—Midwest Refining Co., February 21. All crude over 37 gravity, $1.31 per barrel.

Column 8—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posted 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 9—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES
Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)*

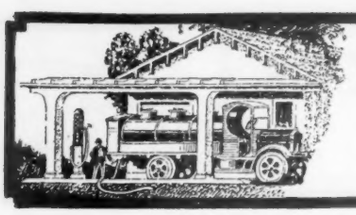
Gravity—	1 Fullerton, Seal Beach, Long Beach, Huntington Beach, Richfield, Rosecrans-Dominguez, Torrance-Inglewood	2 Whittier, La Habra, Montebello	3 Kern River, Newhall-McKittrick, Midway-Sunset, Elk Hills, Lost Hills, Beldridge, Buena Vista Hills, Coyote	4 Santa Fe Springs	5 Coalinga	6 Wheeler Ridge	7 Santa Maria, Ventura, Orcutt, Salt Lake
14°	.85	.85	.75	.85	.75	.75	.85
15°	.85	.85	.76	.85	.75	.75	.85
16°	.85	.85	.75	.85	.75	.75	.85
17°	.85	.85	.75	.85	.75	.75	.85
18°	.85	.85	.75	.85	.75	.75	.85
19°	.85	.85	.75	.85	.75	.75	.85
20°	.85	.85	.77	.85	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.85	.78	.78	.85
23°	.88	.85	.83	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.83	.82	.87
27°	.94	.88	.91	.92	.88	.85	.83	.88
28°	.96	.89	.93	.93	.89	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.02	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.12	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to28 degrees; Domingues, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 8—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura and Orcutt, 14 to 39 degrees. Posted by Union Oil Co.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns March 13.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago dist.	14.0	16.0	...	12.0
Decatur, Ill.	13.5	15.5	...	12.1
E. St. Louis	13.1	15.35	...	11.2
Joliet	14.4	16.4	...	12.3
Peoria	14.2	16.2	...	12.1
Quincy	14.2	16.2	...	11.9
Davenport, Ia.	17.5	19.5	3.0	12.3
Des Moines	15.9	17.9	3.0	12.3
Keokuk	17.5	19.5	3.0	12.3
Sioux City	17.1	19.1	3.0	11.9
Duluth, Minn.	15.5	17.5	2.0	12.9
Minneapolis	16.0	18.0	2.0	12.9
Mankato	14.1	16.1	2.0	12.7
La Crosse, Wis.	17.2	19.2	2.0	13.0
Milwaukee	16.1	18.1	2.0	11.9
Madison	16.3	18.3	2.0	12.1
Detroit, Mich.	17.8	19.8	3.0	13.7
Grand Rapids	17.7	19.7	3.0	13.6
Saginaw	17.9	19.9	3.0	13.8
Evansville, Ind.	17.0	19.0	3.0	13.0
Ft. Wayne	16.4	17.4	3.0	13.4
Indianapolis	17.2	19.2	3.0	12.2
South Bend	17.4	19.4	3.0	13.4
Fargo, N. D.	18.9	20.9	2.0	14.9
Huron, S. D.	19.5	21.5	4.0	13.9
Sioux Falls	16.0	18.0	4.0	13.4
*K. C., Mo.	14.9	16.9	3.0	10.6
*Springfield	16.8	18.8	3.0	11.5
*St. Louis	15.6	17.9	2.5	11.3
*St. Joseph	14.5	16.5	3.0	11.2
Wichita, Kans.	14.8	16.8	2.0	10.8
Bartlesville, Ok.	15.5	17.5	3.0	10.5

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	14.7	9.5
V. M. & P. naphtha	16.2	11.0
Cleaner's naphtha	18.0	12.0
Stanisol	19.0	12.5

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 or more gallons	7.5

Note — Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline: 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district, the following quantity discount schedule is in effect on tank wagon deliveries of gasoline: 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
All Ohio points	17.0	19.0	3.0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.*

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.0	17.0	3.0	11.0
Fort Worth	14.0	17.0	3.0	11.0
Houston	13.0	17.0	3.0	15.0
San Antonio	14.0	17.0	3.0	10.0
El Paso	15.0	18.0	3.0	16.0
Texarkana	16.0	20.0	3.0	12.0
Muskogee, Ok.	16.0	17.0	3.0	11.0
Okla. City	14.0	15.0	3.0	11.0
Tulsa	15.0	26.0	3.0	11.0
Ft. Smith, Ark.	17.0	18.0	5.0	10.0
Little Rock	19.0	20.0	5.0	11.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1¼ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
*N. Orleans, La.	15.5	18.5	3.0	14.0
Baton Rouge	14.0	17.0	2.0	12.5*
Alexandria	15.0	18.0	2.0	14.0
LaFayette	15.0	18.0	2.0	12.5
Lake Charles	15.5	18.5	2.0	14.0
Shreveport	15.5	18.5	2.0	13.0
Kn'xville, T'nn.	19.5	22.5	3.0	15.0
Memphis	17.0	18.5	3.0	14.0
Chattanooga	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	19.0	20.0	5.0	11.0

*Tax of 3 cents includes city tax of 1 cent.
*Louisiana kerosene prices include 1-cent State tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	17.0	19.0	4.0	14.0
Augusta	19.0	22.0	4.0	16.5
Macon	16.0	19.0	4.0	13.5
Savannah	17.0	19.0	4.0	14.5
Birm'h'm, Ala.	18.0	21.0	4.0	14.5
Mobile	17.0	20.0	4.0	14.0
Montgomery	16.0	19.0	5.0	15.5
Clarks'le, Miss.	17.0	20.0	4.0	11.5
Jackson	17.0	20.0	4.0	11.5
Natchez	16.5	19.5	4.0	14.0
Gulfport	18.5	21.5	6.0	14.0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla.	18.0	21.0	5.0	11.5
Miami	20.0	23.0	5.0	14.5
Pensacola	19.0	22.0	5.0	13.0
Tampa	18.0	21.0	5.0	13.0
Lexington, Ky.	18.0	21.0	5.0	15.5
Covington	19.0	22.0	5.0	15.5
Louisville	18.0	21.0	5.0	15.0

In addition to the State tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline. Kerosene prices in Georgia includes 1 cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to State tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.0	*22.0	...	13.0
Philadelphia	15.0	*21.0	...	13.0
Scranton	16.0	*22.0	...	13.0
Allentown	16.0	*22.0	...	13.0
Altoona	16.0	*22.0	...	13.0
Erie	12.0	*18.0	...	13.0
Dover, Del.	19.0	22.0	3.0	13.0
Wilmington	19.0	22.0	3.0	12.0
Spring'd, Mass.	15.0	18.0	...	15.0
Worcester	18.0	18.0	...	15.0
Boston	18.0	18.0	...	15.0
Providence, R.I.	20.0	20.0	2.0	15.0
Hartford, Conn.	20.0	20.0	2.0	14.0
New Haven	20.0	20.0	2.0	15.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	17.0	19.0	...	15.0
*New York	17.0	19.0	...	15.0
Buffalo	15.0	18.0	...	14.0
Rochester	15.0	18.0	...	14.0
Syracuse	17.0	19.0	...	15.0
Boston, Mass.	18.0	19.0	...	15.0
Augusta, Me.	21.0	23.0	4.0	15.0
M'nch't'r, N. H.	21.0	22.0	4.0	15.0
Burlington, Vt.	20.0	22.0	3.0	15.0

*Price in steel barrels.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	15.25	17.25	2.0	12.25
McCook	14.75	14.75	2.0	11.50
Norfolk	16.75	18.75	2.0	12.75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13.00

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
San Francisco	17.0	21.0	3.0	15.5
Pueblo	18.0	18.0	3.0	15.5
Los Angeles	16.5	20.5	3.0	15.5
Reno, Nev.	22.0	26.0	4.0	19.0
Portland, Ore.	17.5	21.5	3.0	16.5
Seattle, Wash.	16.5	20.5	2.0	16.5
Tacoma	16.5	20.5	2.0	16.5
Spokane	20.5	24.5	2.0	20.5
Phoenix, Ariz.	23.0	27.0	4.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City	18.0	20.0	2.0	14.0
Newark, N. J.	18.0	20.0	2.0	14.0
Annapolis, Md.	20.0	23.0	4.0	12.0
Baltimore	20.0	23.0	4.0	10.0
Cumberland	20.0	23.0	4.0	14.0
Washington	18.0	21.0	2.0	12.0
Danville, Va.	20.5	....	4.5	14.0
Norfolk	20.5	23.5	4.5	12.0
Petersburg	20.5	23.5	4.5	14.0
Roanoke	20.5	23.5	4.5	14.0
Richmond	18.5	21.5	4.5	14.0
Ch'rlst'n, W.Va.	20.0	23.0	4.0	14.0
Keyser	20.0	23.0	4.0	14.0
Parkersburg	17.0	20.0	4.0	14.0
Wheeling	20.0	23.0	4.0	14.0
Charlotte, N. C.	20.0	23.0	4.0	14.0
Hickory	20.0	23.0	4.0	14.0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14.0
Charlst'n, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	23.0	5.0	14.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	16.0	18.0	3.0	14.5
Pueblo	16.0	18.0	3.0	14.5
Grand Jct.	20.5	22.5	3.0	18.0
Casper, Wyo.	17.0	19.0	3.0	13.0
Cheyenne	18.0	20.0	3.0	14.5
Butte, Mont.	22.5	22.5	3.0	19.0
Helena	22.5	24.5	3.0	19.0
Salt L'ke, Utah	20.0	21.0	3.5	17.0
Aubu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho	23.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0

TANK WAGON CHANGES

March 2—Magnolia Petroleum Co. increased the gasoline station price 1 cent to 20 cents at Texarkana.

March 5—Standard Oil Co. of Louisiana reduced kerosene 1 cent in LaFayette, La., to 12.5 cents.

March 5—Standard Oil Co. of New York posted gasoline tank wagon and station prices 17 cents and 19 cents respectively at Syracuse, N. Y. Magnolia Petroleum Co. decreased the gasoline station price 1 cent to 18 cents at El Paso, Tex.

March 6—Atlantic Refining Co. increased the gasoline tank wagon and station prices 1 cent in Springfield and Worcester, Mass., and in Providence, R. I. In Boston, Mass., these were increased 3 cents.

Indian Commissioner Takes Up Matter of Sale of Naval Tracts

Charles H. Burke, Commissioner of Indian Affairs of the Department of the Interior, spent a few days this week in Tulsa, in conference with Umpire Ray M. Collins, and the members of the Seminole advisory committee, and also with the Osage Oil & Gas Lessees Association regarding the coming public sale of Osage leases to be held March 28 and 29.

While no final statement was made regarding the details of the lease sale, it now seems reasonable to believe that the tracts containing the producing wells in the Naval Reserve and tracts offsetting may be withdrawn. These tracts have been a storm center, and have drawn much unfavorable comment from the oil producers of the Mid-Continent Field, because of being offered at this time.

There has been a pronounced feeling that the Department of the Interior should not offer the Naval Reserve tracts for sale now and thereby encourage drilling and new production at a time when efforts were being directed to curtailing drilling and holding in oil production until there is need for the oil. The feeling was all the more pronounced on account of the strong position which Dr. Hubert Work, Secretary of the Interior, has maintained regarding the overproduction of oil.

Commissioner Burke went from Tulsa to Pawhuska, where he will confer with J. George Wright, superintendent of the Osage Nation of Indians. At Tulsa, he declared that he was willing to work in harmony with the Osage Lessees' Association, and with any other body which was directing its efforts towards real oil conservation.

NOVA SCOTIA GASOLINE TAX

CHATHAM, Ontario, Mar. 10.—The provincial gasoline tax in Nova Scotia has been increased from 3 cents to 5 cents per gallon, effective March 7. A decrease has been made in the motor registration fee.

CRUDE OIL PRICES

(Continued from Page 151)

*Thrall	1.75
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co. Thrall prices same as North Central Texas less 19¼ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

(Effective March 14)

Rock Creek, Wyo. (March 12)	$1.25
Salt Creek	See gravity table
Big Muddy (March 12)	$1.25
Mule Creek (May 1)	1.10
Grass Creek, heavy	.90
Grass Creek, light	1.32
Elk Basin (March 12)	1.33
Lance Creek (March 12)	1.33
Poison Spider	1.00
Notches	.65
Rex Lake (February 22)	1.10
Osage	1.33
Lost Soldier (contract)	.95
Greybull-Torchlight	1.32
Hamilton Dome	.85
Cat Creek (Mont.)	1.33
Sunburst (Mont.) (Jan. 25, 1928)	1.50
Artesia (March 12)	1.00
Hogback (N. Mex.) (March 14)	1.33

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency

(Effective December 17)

Penna Grade Oil in New York Transit Line (New York)	$2.80
Bradford District Oil in National Transit Lines (Pennsylvania)	2.80
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.65
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	2.65
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.60
Penna Grade Oil in Buckeye Pipe Line lines (Ohio)	2.35
Cabell Grade Oil in Eureka Pipe Line lines (West Virginia) (February 9, 1928)	1.35
Corning 35-cent grade oil in Buckeye Pipe Line Co.'s line (December 19)	1.45
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (December 19)	1.45
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (February 9, 1928)	1.45
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (August 1)	.90
Keister (Pennsylvania) (August 1)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective March 14, 1927)

Lima (February 10)	$1.55
Wooster	1.57
Illinois (Feb. 23, 1928)	1.50
Indiana (Feb. 10, 1928)	1.32
Princeton (Feb. 23, 1928)	1.50
Plymouth (Feb. 23, 1928)	1.23
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.32
**Saginaw, Mich., Saginaw Sand (May 27)	2.05
**Saginaw, Mich., Berea Sand (May 27)	1.95
†Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 16)	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
§Oil Springs (Canada) (February 10, 1928)	2.62
§Petrolia (Canada) (February 10, 1928)	1.96

*Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

MEXICAN CRUDE

Note—Due to the fact that the exportation of Tuxpam light crude oil has become a negligible factor, prices will no longer be published.

*Panuco heavy (f.o.b. Mex. ports)	$1.15

*$.15.

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Oil Securities Sluggish During Week

Fractional Losses Prevailing Order of Transactions. Trading Noticeable in Specialties Following General Trend

The oils were again a sluggish picture last week, with fractional losses the prevailing order of transactions. Trading in the general market was most noticeable in specialties, and the oils resembled the remainder of the market in this respect. Sinclair Consolidated was the feature of the oils selling at 22½, a new high for 1928, for this issue. There has been ample western purchasing of this stock, and it is believed to be under accumulation by exceptionally keen market students.

Much interest is shown in the dividend meeting of the Prairie Pipe Line Co., which will be held late this week.

Houston Oil

Consolidated statement of Houston Oil Co. of Texas and Houston Pipe Line Co. for year ended December 31, 1927, shows net profit of $2,429,331 after depreciation, depletion, Federal taxes, etc., equivalent after preferred dividends, to $7.57 a share earned on 249,686 shares of common stock. This compares with $2,226,801 or $6.77 a share in 1926.

Consolidated income account for 1927 compares as follows:

	1927	1926
Gross	$ 8,964,768	$ 7,258,068
Exp., ordinary taxes, etc	3,331,231	2,730,753
Depreciation	1,799,237	1,321,686
Depletion	53,162	64,251
Balance	$ 3,781,138	$ 3,141,378
Other income	262,876	407,462
Gross income	$ 4,044,014	$ 3,548,840
Interest, amort., etc..	1,326,824	1,231,039
Federal taxes	287,859	*91,000
Net profit	$ 2,429,331	$ 2,226,801
Preferred dividends...	536,856	536,856
Surplus	$ 1,892,475	$ 1,689,945

*Estimate for 1926, less 1925 provision of $34,000 not required.

Illinois Pipe Line Co.

Statement of Illinois Pipe Line Co. as of December 31, 1927, shows total assets of $41,872,168, comparing with $39,014,455 at end of 1926, and profit and loss surplus $7,819,570 against $6,406,743 at close of previous year.

Balance sheet of Illinois Pipe Line Co. as of December 31, 1927, compares as follows:

Assets	1927	1926
Inv. pipe line prop.	$32,169,009	$30,010,587
Other investments	3,071,220	4,253,373
Cash and accts. rec.	3,070,380	3,706,176
Material and supplies	1,011,532	879,488
Def. assets, etc.	550,027	164,831
Total	$41,872,168	$39,014,455
Liabilities		
Capital stock	$20,000,000	$20,000,000
Tax liabilities	923,166	782,436
Depr. reserve	12,774,377	11,675,342
Accts. payable	213,054	109,071
Unadj. credits	142,001	40,863
Surplus	7,819,570	6,406,743
Total	$41,872,168	$39,014,455

Lion Oil Refining

Lion Oil Refining Co. reports for year ended December 31, 1927, net income of $450,975 after interest, depreciation, depletion and Federal taxes, equivalent to $2.25 a share earned on 200,000 no par shares of stock. This compares with $1,181,278 or $5.90 a share in 1926.

Income account for year 1927 compares as follows:

	1927	1926
Sales	$ 5,884,050	$ 8,555,320
Costs and expenses...	4,473,640	6,054,511
Oper. profit	$ 1,410,410	$ 2,500,809
Other income	28,258	21,882
Total income	$ 1,438,668	$ 2,522,691
Interest	48,277	69,738
Dper. and depl. res...	886,416	1,090,569
Federal taxes	53,000	181,106
Net income	$ 450,975	$ 1,181,278

Balance sheet of Lion Oil Refining Co. as of December 31, 1927, follows:

Assets: Cash, $173,549; accounts and notes receivable, $449,903; inventories, $1,082,562; prepaid expenses, $28,923; producing property and equipment, $5,307,019; non-producing leases, $263,963; refining plant, tank cars, pipe lines, etc., $3,893,747; other investments, $33,768; total, $11,233,434.

Liabilities: Notes payable, $221,500; accounts payable, $197,102; dividends payable, $100,000; reserve and accruals, $178,639; first mortgage gold bonds, $500,000; deferred liabilities, $25,062; depreciation and depletion reserve $4,348,055; capital stock and surplus, represented by 200,000 no par shares, $5,662,476; total, $11,233,434.

Omar Oil & Gas

Stockholders of Omar Oil & Gas Co. have ratified change of name to Phoenix Oil Co. and proposed change in the capital structure from authorized issue of 750,000 shares capital stock, $10 par, to 1,500,000 shares 6 per cent cumulative preferred, $1 par 500,000 shares of no par preferred and 4,000,000 shares of no par common stock.

The Texas Corporation

The Texas Corporation, for year ended December 31, 1927, reports net income of $20,029,406, after federal taxes, depreciation, depletion, intangible drilling costs and other charges, equivalent to $2.78 a share (par $25) earned on 7,219,243 shares of stock. This compares with $36,043,330, or $5.46 a share on 6,578,000 shares of stock, reported by The Texas Company in 1926.

Consolidated income account for year 1927 compares as follows:

	1927	1926
Gross earn.	$141,125,857	$166,173,512
Gen. exp.	80,539,912	.....
Taxes	*7,168,247	.....
Intang. drill. costs..	8,470,422	.....
Depl. and amort. ..	7,553,475	.....
Deprec.	21,189,643	.....
Oper. inc.	$16,204,158	.....
Other inc.	4,401,824	.....
Total inc.	$20,605,982	.....
Interest	576,577	.....
Net inc.	$20,029,405	$36,043,330
Div. cash	21,180,915	19,734,000
Deficit	$1,151,510	$16,309,330
Prev. surp.	†128,528,708	113,466,023
Ttl. surp.	$127,377,198	$129,775,353
Adjust.	‡87,022	‡1,412,812
Balance	$127,464,220	$128,362,541
Stock divs.	16,404,825	.....
P. and L. surp.	$111,059,395	$128,362,541

*In addition $17,224,438 was paid or accrued for state gasoline taxes. †Adjusted. §Surplus. ‡Credit. ¶Direct deductions against previous surplus.

Consolidated balance sheet of The Texas Corporation as of December 31, 1927, compares as follows:

Assets	1927	1926
Pl. eq. etc.	†$186,321,624	$288,908,534
Invest.	673,000	1,090,393
Supplies	5,738,017	6,303,176
Oil invent.	89,557,738	95,919,530
Accts. and notes rec.	21,602,027	23,923,093
Cash	18,108,477	13,433,789
Other curr. assets	134,309	.....
Def. chgs.	2,671,179	2,808,261
Total	$324,806,371	$432,386,716
Liabilities		
Cap. stk.*	$180,481,075	$164,450,000
Dep. pur. ob.	2,423,511	1,859,135
Ac. and notes pay...	21,262,222	24,051,456
Accr. liab.	3,265,592	.....
Fed. tax.	.....	4,796,446
Div. pay.	5,414,365	.....
Amort. res.	.....	608,056
Def. credits	900,211	.....
Depr. res.	.....	108,259,082
Surplus	111,059,395	128,362,541
Total	$324,806,371	$432,386,716

*Par $25. †After reserves for depreciation, depletion and amortization.

The Texas Corporation's statement for 1927 follows the uniform system of accounting approved at the last annual meeting of the American Petroleum Institute, and for that reason there are numerous changes in presentation of income account. Notable among these is showing of $8,470,422 for intangible development costs, first time this item has been segregated.

Net equal to $2.78 a share on 7,219,243 shares was $1,151,000 short of covering the $3 dividend, which amounted to $21,180,916. Net compared with $36,043,330, equal to $5.47 a share on 6,578,000 shares, in 1926. Last year The Texas Corporation declared a 10 per cent stock dividend, this being reason for larger stock issue.

Inventory item of crude and refined oils at $89,557,738, representing market value, lower than cost, was $6,400,000 less than end of 1926. Cash increased about $4,700,000 to $18,108,477; bank loans increased $800,000 to $7,556,887, while accounts payable were reduced $3,500,000 to $13,705,335.

Solar Refining Co.

The statement of the Solar Refining Co. as of December 31, 1927, follows:

Assets		
Real estate		$124,708.52
Plant	$5,251,957.78	
Less depreciation..	3,336,461.94	
	$1,915,495.84	
Incomplete construction	298,065.04	
Net plant		2,213,560.88
Inventories		1,153,206.49
Deferred charges		224,961.81
Accounts receivable		175,399.88
Other investments.		2,706,706.25
Cash		421,038.32
		$7,019,581.05
Liabilities		
Capital stock		$4,000,000.00
Accounts payable..		239,794.73
Deferred credits		166.51
Contingent reserves		2,500,000.00
Surpl. Jan. 1, 1927.	$1,241,966.21	
Add refund of federal income tax 1909 to 1923, inc.	272,320.85	
	$1,514,287.06	
Deduct adjustment of depreciation and plant accounts, etc., for prior years	356,609.83	
Adjusted surplus, Jan. 1, 1927	$1,157,677.23	
Dividends paid 1927	400,000.00	
Loss for 1927	478,057.42	
	878,057.42	
Surplus Jan. 1, 1928		279,619.81
		$7,019,581.05

The White Eagle Oil & Refining Co. declared its regular quarterly dividend of 25 cents a share, payable April 20, 1928, to stockholders of record March 30, 1928.

Simms Petroleum

Report of Simms Petroleum Co. and subsidiaries for year ended December 31, 1927, shows net loss of $61,369 after interest, taxes, depreciation and depletion. This compares with net income of $1,491,-

(Continued on Page 159)

LIST OF ACTIVE PETROLEUM STOCKS

Stocks—	Par	Clos. Quot. Mar.12	Clos. Quot. Mar.5	1928 High	1928 Low	1927 High	1927 Low	1926 High	1926 Low
Amerada Corp.	..	29½	29⅝	32¾	27½	37⅛	27⅝	32⅝	24¾
Atlantic Refining, com.	100	107½	102½	109⅞	95⅝	131⅝	107	128⅝	97
Barnsdall "A"	25	24	23¾	26½	22½	35½	20¾	32½	23½
California Petroleum, com.	25	26	25¾	26⅞	24	32⅞	20	38⅛	30⅞
Houston Oil	100	135	132⅝	156⅛	127⅞	175⅝	60⅛	75	50⅛
Independent Oil & Gas	..	25⅞	25⅝	28⅛	21⅝	32⅜	17⅝	34	20¼
Louisiana Oil	10	10	*10¼	12¾	9⅝	18⅛	10½	19⅝	12
Maracaibo	..	15⅝	15⅝	18⅛	12½	22⅜	12	27⅜	18⅝
Marland	..	35½	35½	38⅝	33	58¼	31	63⅝	41¼
Mid-Continent Petroleum	..	27⅛	26⅞	29½	25⅛	39⅞	25½	41	25⅞
National Supply	50	92⅝	93	96½	89¼	95⅜	76	84⅞	55⅛
Oil Well Supply	25	35	34	41	34½	44⅜	31¼	36	30
Pan American, B	50	42¼	42½	46⅜	37⅜	66⅜	45½	72⅝	56⅛
Pan American, Western B	..	20	*19½	21	18¼	37⅞	16⅝	46	34
Phillips Petroleum	..	39	38⅝	43½	35½	60¼	36½	54⅞	42½
Producers & Refiners	50	19½	19⅝	26	16	33⅞	16⅜	26	11
Pure Oil, com.	..	22	21⅝	27½	19	33½	25	31	25⅜
Royal Dutch, N. Y., sh.	13.40	46	45⅝	48⅝	44⅝	54½	44¼	57⅝	49⅜
Shell Transport	10	42⅜	44½	42⅞	39⅜	49	41½	48⅞	42
Shell Union, com.	..	25⅝	25⅝	26⅞	23¼	31⅜	24⅝	30⅞	24
Simms Petroleum	10	20⅝	21⅛	24⅝	18	23⅞	14¼	25⅝	16⅛
Sinclair Consolidated	..	21⅛	19⅝	22⅝	17½	22⅜	15⅛	24⅞	16⅜
Skelly Oil	25	26	26	28¼	25	37⅝	24⅛	37¼	27
Standard of California	25	55	54½	56⅝	53	60⅜	50⅜	63½	54
Standard of New Jersey, com.	25	39⅛	39	40¼	37⅝	41⅜	35½	46⅝	37½
Standard of New York	25	29⅜	30¼	31⅝	28⅞	34½	29⅜	47¼	30⅝
Sun Oil Co.	..	41	40⅜	41⅛	31½	34⅞	30	41¼	30⅛
The Texas Company	25	51½	51¾	55⅜	50	58	45	58	48
Texas Pacific Coal & Oil	10	12½	13	17	12⅛	18⅞	12	19½	12⅛
Tide Water Associated	..	15⅝	15½	17¼	14⅝	19¼	15⅜	21	17
Transcontinental	..	8⅛	8½	10⅛	7⅛	10⅜	3⅝	5½	3
Union Oil of California	25	46⅝	45	45⅝	42⅜	56⅛	39⅜	53⅜	37¼
Union Tank, com.	100	124	118½	125	119¼	126	94	120⅝	84¼
White Eagle Oil & Refining	..	21	*21½	24¼	20¼	27½	21⅜	29⅝	25½
Standard Oils									
Anglo-American Oil	£1	*20⅝	*20⅝	21⅝	18½	21⅝	17⅛	19⅜	16½
Borne Scrymser	25	*49	*50	56	50	69	49⅛	75	65
Buckeye Pipe Line	50	*63½	*59	63	58	59	45	69½	42
Chesebrough Manufacturing Co.	25	130	*123	149⅝	120	126	76⅛	81¼	63
Continental	10	17⅝	17⅝	23	16	22⅝	16⅛	25⅞	10⅛
Cumberland Pipe Line	100	*88	*90	105	94	§137	90	137	102
Eureka Pipe Line	100	*70	*68	70	64½	66	47	43¾	43
Galena Signal, com.	100	8	*5	6½	4	13½	4½	32⅛	9⅞
Humble Oil & Refining Co.	25	63⅛	64½	68	58½	67⅝	54	99⅝	52
Illinois Pipe Line	100	201	188	188⅝	176½	181½	123⅜	144	131
Imperial Oil	..	59	59	65⅛	56⅞	64⅜	37⅜	39⅜	32¼
Indiana Pipe Line	50	81⅜	79	79	75	93	61	68	52½
International Petroleum Co.	10	37	37	43	35	36⅜	28¼	35¼	28⅜
National Transit Co.	12.50	27½	27½	23⅞	20½	23¼	13⅛	30⅜	27¼
New York Transit	100	*53½	*50	48	38½	42	31½	61½	27¼
Northern Pipe Line	100	*114	*110	103	94	96	70	80½	64
Ohio Oil Co.	25	60⅜	60⅝	66½	58½	66	52	67⅝	55⅜
Penn-Mex Fuel	25	*39½	*41	39⅞	33	36½	12	24¼	15
Prairie Oil & Gas	25	49	49	50¼	47⅝	55½	45⅝	60¼	49
Prairie Pipe Line	100	207	205	216	184	189¼	132	137½	122½
Solar Refining Co.	100	*117	*177	178	175	§201½	178	212	184½
South Penn Oil	25	*38½	37	40⅛	36⅜	41⅝	34½	50	30
Southwest Pa. Line	100	*98	*95	88⅜	70	78	55½	56	47½
Southern Pipe Line	50	*29	*26	33½	21	39	18½	27	34
Standard of Indiana	25	73⅜	73⅞	80½	71⅛	80¼	64⅝	70½	60½
Standard of Kansas	25	*16½	*15⅛	17	15	20⅞	15⅝	36½	26½
Standard of Kentucky	25	128½	125	133	124	125½	111½	134⅝	107
Standard of Nebraska	25	*41½	*41¼	43	40½	49½	43	51⅛	42
Standard of Ohio, com.	100	*72⅛	*72⅜	79⅜	72	81⅛	72	362	192½
Swan & Finch, com.	25	*16	*17	17⅜	16½	21	11½	21	18
Vacuum Oil	25	141⅝	143½	149	136⅝	147	95¼	109¾	97½
Miscellaneous									
Gulf Oil Corp. of La.	25	106⅞	107	117¼	101⅛	116	86¼	95	82½

*Bid, no sales. ‡Old stock. †New stock. §Ex-dividend.
Quotations furnished by W. J. Wollman & Co.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb was as follows:

Mar. 12	62.07	Feb. 6	62.03	Dec. 31	62.09
Mar. 5	62.56	Jan. 30	62.75	Dec. 27	62.86
Feb. 27	62.54	Jan. 23	63.49	Dec. 19	63.24
Feb. 20	60.77	Jan. 16	63.87	Dec. 12	62.07
Feb. 13	61.02	Jan. 9	63.55	Dec. 3	62.06

FARISH TELLS WEST TEXAS PRODUCERS NEW ERA IN PETROLEUM IS HERE

By W. S. Farish*

The 1928 picture of supply of crude oil is just beginning to be thoroughly revealed.

As we view the situation, beginning with the points farthest from our market—the East Indies has production in excess of refinery consumption and market demand, and today has shut-in production of a considerable quantity and undeveloped areas of real magnitude. The next area of importance—the Persian Gulf and Irak country—is perhaps producing and marketing a smaller percentage of potential production and a smaller percentage of oil in its relation to the total quantity in sight than any other area in the world. The recent discoveries in Irak are going to necessarily bring some of this new crude on the market by the end of the year, or by the time transportation facilities are provided. In Russia perhaps most of the oil being produced today is finding a market. With any reasonable effort the Russians believe they can greatly increase the production, and have recently been reported seeking capital in order to increase production.

With the exception of the Argentine, all South American countries where oil is being produced, are large exporters of crude oil, and an oversupply, in the sense that supply exceeds demand, exists there. There is shut-in production in Peru, in Colombia and Venezuela. Even in Mexico, with its greatly reduced production, we find an exporting country which is contributing to the general oversupply. This brief summary includes the major producing countries, and reveals that in all of them there is an abundant or oversupply at the present time.

Shut-in Production

Coming to the United States, we find the recent agreements in California between the Governor's committee and the producers adding 75,000 bbls. to the 75,000 bbls. already shut in, making a total of 150,000 bbls. per day, this amount being roughly one-fourth of the present actual production. In Wyoming we find the great Salt Creek Field shut in to an actual production of perhaps 33⅓ per cent of the potential. This condition, however, is rather normal to this area because the United States Government, as lessor, has co-operated with the producers to curtail and keep closed in some of this production over the past few years. In Oklahoma we find the production much less than it has been, but today the agreements to curtail development in the Seminole area are still effective, and, in the opinion of a great many, indiscriminate development in Oklahoma would soon bring about production in excess of demand. The continuance of these agreements, or similar agreements, in the views of those best informed on Oklahoma conditions, is the only thing that promises to keep production within the demand of its market.

Situation in Texas

In Texas we know all the situation. The actual shut-in production in Texas is confined to West Texas. In the rest of the State there is a very small amount of shut-in production. The record of the past year shows that in spite of the effort to curtail and stop development 64,000,000 bbls. of crude and products were added to storage in the United States. This is the record of the Bureau of Mines. A report from the same source for the month of January shows a little in excess of 12,000,000 bbls. of crude and products went into storage. This sounds too high. Nevertheless, that is the report of the bureau, and this in face of the fact that we have shut in the amount of production above listed. This is the situation in spite of the fact that we have had very low crude and product markets over the past year, which undoubtedly has limited effort and restricted development to a large extent. Most students of the situation agree that even though we are selling crude and products at the extremely low price prevailing today and though we curtail and hold back all the production possible, we are going to add additional crude and products to storage this year.

We of the Humble company came to the conclusion more than a year ago that our industry had entered a new era in its producing history. We believed that geology with its attendant aid, geophysics, had such a comprehensive grasp and knowledge of the sedimentary rock areas of our country, and the finding ability of the industry had developed to the point where we were certain to produce more oil than the market could absorb, if we received anything like a profitable price for our production. Therefore, believing this, we advised our stockholders in February, 1927, that it would be the policy of our company to carry on its business, if possible, without adding any crude to storage. This policy was dictated by the above conclusion that to carry oil in storage was unnecessary and could not be profitable, and this conclusion, we think, was sound at the time, and we think it still sound. In fact, everything that has subsequently happened has shown our position, taken last year, to be sound.

Influence of Foreign Oil

Oil is perhaps the most easily transported and readily moved article of commerce. It is our judgment that because of the facility of movement and the wide distribution of supply, the price of crude oil and its chief products are probably more sensitive to the influences of supply and demand than any other major commodity. Pipe lines, railroads, tank ships, modern terminal facilities, all make it available at seaports with utmost facility. This being true, oil from any one of the above-listed producing countries contributes its influence in making prices the world over, and an oversupply of crude at any point that must have an outlet unquestionably influences to some degree the market situation the world over.

The oil industry labors under a disadvantage in restricting production to economic needs on account of the fact that the lessor can force uneconomic development and production without himself taking any risk of the loss incident to such excessive effort required of the lessee. This situation does not exist in any other industry to any appreciable extent.

We are here primarily in connection with the present situation in West Texas. It required no imagination to realize the distressing oversupply that we face from this area. The oil now moving to market in West Texas totals approximately 220,000 bbls. daily—144,000 bbls. by pipe line, 52,000 by tank cars and the balance through consumption by local refineries in the district. In addition about 80,000 bbls. daily is going into storage; so that the total production in West Texas is about 300,000 bbls. daily.

Proven Acreage

The amount of proven acreage in West Texas is stupendous. It runs into thousands of acres, proven and semiproven—the Yates Pool, 15,000 acres; Winkler County, 30,000 odd; Howard County, 12,000; Crane-Upton Counties, 35,000. This acreage is only partly developed.

The potential production from this area today is approximately 1,500,000 bbls., if every well were opened. How long this could be maintained by additional wells is anyone's guess. The amount of oil that can be moved to market at the present price is probably limited to 200,000 bbls. daily. The physical outlet that will be available shortly with the completion of pipe lines will approximate 400,000 bbls.

At the Gulf this oil is meeting in competition crude from Venezuela and Mexico—especially Venezuela. Venezuela production is reported to be moving to market at the rate of 25,000 bbls. daily, with potential production probably double this amount. There is every prospect that unless Venezuela production is controlled, we shall see before the end of the year in excess of 300,000 bbls. of this oil per day going to market. This oil is being delivered to Atlantic seaboard refineries at a price of around $1.10 per bbl. Some cargoes are reported to have been sold at a lesser price. It seems almost a certainty that West Texas oil will have to give place to whatever oil is moved from Venezuela as it is an accepted fact that Venezuela oil can be produced and delivered to market at lower cost than West Texas oil. Necessarily this situation puts a limit on the capacity of the market to absorb West Texas crude.

It is our deliberate judgment that the present price relation of West Texas crude to the crudes of Venezuela, California and the Mid-Continent limits the ability of the market to absorb West Texas crude, as stated above, to approximately 200,000 bbls. per day. If this conclusion is sound, and we believe it to be sound, the only way larger quantities of West Texas oil can reach the market is at a sacrifice in price that will permit it to displace other crudes or that will create new markets. Regardless of price only a limited amount of West Texas crude can be moved to market this year.

Competition of Imports

It seems proper here to make some comment concerning the influence on our market of the competition of imported crudes. In the year 1926 we imported 60,382,000 bbls. of crude and 20,938,000 bbls. of refined products, or a total importation of 81,320,000 bbls. We exported 15,407,000 bbls. of crude and 116,087,000 bbls. of refined products, so that our exports of refined products and crude exceeded the total importation of crude and products by 50,174,000 bbls. In 1927 we imported 58,156,000 bbls. of crude and 13,352,000 bbls. of refined products, or a total importation of 71,508,000 bbls. We exported 15,843,000 bbls. of crude and 125,696,000 bbls. of refined products, so that our exports of refined products and crude exceeded the total importation of crude and products by 70,031,000 bbls.

This shows that the American petroleum industry is refining and manufacturing into marketable products the raw material—crude oil—that is imported. If, by import duties, this foreign oil is kept out of the United States it will be refined elsewhere and the products will supply to that extent the foreign market which is now being supplied by our refineries in this country. We believe the present price to be low enough. We believe it to be, on the average, below the cost of production. We are advised that contracts covering the delivery of several million barrels of Winkler County crude have been made at a price that is considerably below the present posted price of 60 cents that Humble is paying for West Texas crude. This is evidence of the fact that as this oil is forced on the market it must take a price below the present going price. It is, and always has been, the Humble company's desire and policy to render as efficient service as possible to its customers, the producer on one side and the consumer to whom it sells on the other. To perform this service we have laid pipe lines pretty much all over the State where the occasion warranted and where the investment seemed reasonably safe. We are in the pipe line business, that is, the transportation business, as well as the producing business.

What Humble Has Done

Humble has attempted to serve this West Texas area as a transporter and purchaser of crude. Since 1924 to the end of the year 1927 this West Texas area has produced 99,000,000 bbls. and the Humble company, through the Humble Pipe Line Co., has handled 48,000,000 bbls., approximately one-half of all the oil produced in this area. Humble has always paid the highest posted price that would permit the oil bought to be sold in competition with other oils. We have spent in excess of $25,000,000 building pipe lines and necessary facilities to serve this area. It has always been our desire to share with other producers in this State our ability to transport and market crude, and considering the past history of the company we think our record speaks for itself. We have in this West Texas area demonstrated again our desire to share and share alike with other producers, as is emphasized by our action in Pecos County, where 90 per cent of our available market is given the other producers in this pool.

It is still our hope that some means can be found by which all the oil that goes to market from this West Texas area can be equitably prorated so that each producer will have a fair percentage of the outlet. The Humble company is willing in this Winkler County situation to produce, purchase and transport this oil on some fair prorata basis with the other producers, purchasers and transporters, provided all of the oil from this county is so prorated. For the benefit of those who may think to the contrary, we desire to state that our policy is not to buy and store any crude, under the present conditions existing in the industry. If we have to store any crude in West Texas it will be because producing conditions and producing efforts by our neighbors force us to produce and put oil in storage to protect our producing properties. It is our estimate that to store this West Texas oil in steel tankage on a basis of today's price of 60 cents per barrel will, in a period of four years, add 75 cents per barrel to its cost.

Question of Price

We are desirous of maintaining as high a price for West Texas crude as will permit the sale of this crude in competition with other crudes. We are faced with the fact, however, that it will be impossible for us to maintain a market price in excess of that paid by others if there is any considerable volume of crude moved to market at a lower price than that paid by us.

We want to make clear our desire and our effort so that all who are interested may realize that if the West Texas market price should go and a lower price should be realized for this oil, it will be contrary to the desires of our company and will be through conditions over which we have no control. Moreover, it is our belief that even if the price is sacrificed there is still a pyhsical limit to the amount of oil that can go to market this year from West Texas, and a physical limit to the amount that the market can absorb even at a lower price. Unquestionably, if our crude market breaks in West Texas, the volume of oil that will move will be sufficient to affect unfavorably and perhaps lower the crude market in other sections. We wish to repeat again in connection with this West Texas situation that it is our desire and our hope that the production can be prorated and that we can share whatever market outlet we may have for the crude equitably with all producers whom we serve, and that other purchasers and transporters will do likewise.

We think it proper to state here that so far as we know all oil that is being sold in West Texas is being sold at a price that is based upon the Humble company's posted price. In many instances considerable oil is moving to market at a discount below Humble's posted price. We have evidence that offers are being made currently at prices that mean as low as 30 cents and 35 cents at the well in West Texas fields, as compared with our posted price of 60 cents. We want you people to realize that we feel keenly this responsibility, but that we cannot do the impossible. We cannot indefinitely maintain a higher price than our competitors pay for crude.

Suggested Remedies

This commission has asked for a remedy for this situation. We do not know that there is any remedy that would give geenral satisfaction. We do not know that there is anything that can be done by the petroleum industry that will permit it to remain healthy and function as it should. We are frank to admit that we are overwhelmed with the tremendous problem presented in this situation. We have come to several conclusions. Whether or not they are sound time alone will tell.

We are convinced that there can be no prosperity in our industry that is at all general in its nature so long as there is continued indiscriminate effort to produce all the oil available in the shortest possible time whenever an oil field is discovered. If we are to have any measure of prosperity in the producing industry it must come through co-operation on the

*Before State Railroad Commission, Austin, Tex.

part of the industry and the Government to create reserves of petroleum in the ground, unproduced, rather than to accumulate further excessive stocks in tankage on top of the ground. This phase of our producing situation was given particular emphasis by President Coolidge in his original letter appointing the Conservation Board, which letter emphasized the desirability of building up reserves underground. To accomplish this seemed well nigh impossible when this letter was written. Progress has been made; what seemed impossible yesterday is an accomplished fact today, and what seems impossible today is certainly a worthy achievement to attempt to realize tomorrow.

Refining Efficiency

Referring to the new era of production into which the industry has entered. The refining industry has also broadened its scope of operations and increased its efficiency in all its manufacturing processes. No longer is the price and demand for crude violently influenced by the peak consumption of gasoline in the summer months. Just as the finding ability of the industry has advanced in its knowledge, the manufacturing branch of our industry has gone forward by leaps and bounds in its ability to convert a barrel of crude into the division of products required by the demands of commerce, so that today, given a profit price, the refiner will turn ever increasing percentages of crude into gasoline. The conditions of the producing and refining industry today emphasize the fact that to have prosperity in our industry, and in the areas influenced by it, we must keep actual production in balance with consumption. In the long run we probably have no oversupply, as all crude that we can produce will be consumed in time. The real trouble is that the conditions under which we must operate are bringing the crude out of the ground in quantities greatly exceeding consumption requirements of the world.

What remedy should be applied to this West Texas situation is a matter of debate and is a question for this commission to pass upon. We have no desire to put forward a program. We think it worth while to review briefly what has already been accomplished in localities of overproduction.

Salt Creek Example

We feel that the work done by the committee of operators and government people who have worked out the method of handling the Salt Creek Field in Wyoming is perhaps the best example in the United States of the maintenance of ground reserves, orderly production and supply of crude only as the market absorbs it. Next in importance we would place the policy of the larger companies in California of shutting down the operation of wholly controlled properties during periods of overproduction. Unquestionably the ability and willingness of these companies to shut down their own business in this way has materially aided the whole industry in the past. We have heard only this week that the Governor's committee has worked out a new program in California, co-operating with the producers to the end that an additional amount of crude, approximately 75,000 bbls. daily is to be shut in. This last movement was initiated by the State and was made as a conservation measure.

Early last year we saw the producers of Seminole, with the help of the Corporation Commission, work out and follow a general program of restricted production in the Seminole area. This has held down the peak of Seminole production and has saved the building of unnecessary tankage, and has been of tremendous economic benefit.

During the past summer in the development of the Yates Pool in Pecos County the producers interested agreed on a proration policy which is still in effect, dividing the market outlet for this crude on a prorata basis, the present basis being the amount of proven acreage that each producer owns compared to the total.

No proration agreement can be made that will be ideal and that will thoroughly satisfy every producer. The human equation enters into such agreements in such a way that complete accord is perhaps impossible, but what has been done in Pecos, Seminole, California and Wyoming has certainly demonstrated substantial justice to all can be done. Proration is not an idle dream but an accomplished fact, and the idea can be applied to any area provided there is a willingness and a desire on the part of producers and the authorities to work together in a common cause to the end that economic waste and actual waste may be avoided and conservation attained.

LITTLE RIVER PLAN MEANS BIG SAVING TO OPERATORS

(Continued from Page 34)

the activity extended three-quarters of a mile.

When the Earlsboro Field was the scene of active drilling, derricks were placed on every location, five-eighths of a mile from production, and in some cases more than this. There were several instances in this pool where all eight derricks on an 80-acre lease were constructed simultaneously, and the wells were started in a similar manner.

The Bowlegs Field was developed under a similar program, with results which did little to help the profit side of the profit and loss accounts in the oil companies' books; and when one well opened the Little River Field, there were 102 active operations under way in less than two weeks.

Present Plan Different

These events of the history of the Greater Seminole Field are mentioned on account of the sharp contrast they offer to the current drilling plan embodied in the nine wells. Under this plan, the owners of leases offsetting the wells are contributing $10,000 each in dry hole money. Under the regular dry hole contract, this contribution is made only if the well is a failure, and should it become a producing well, the owner of the offset lease starts his own well, and pays nothing to defray the drilling expense of the discoverer. It seems likely a portion of these test wells will be dry, and the cost of their drilling will be distributed among several oil companies, making no extraordinary cost for any one interest or company.

Looking into the future of this region, it might be pertinent to inquire if an expansion of this plan might not be feasible after the nine original wells have been completed. When the first nine wells have been finished, there will be additional outside leases to be tested, and the percentage of the nine test wells which produce, will offer new territory to the drill. To carry out the present plan on the land adjacent to the extensions which will be necessitated by finding production in part of the nine test wells, and by making further limitations to the drilling which will result is another step which the advisory committee and the umpire hope to accomplish.

The majority of the nine test wells should be completed by May 15. If encouraging production should be found in five out of the nine wells, additional restrictions on drilling around the new strikes would not only make a slow careful drilling plan the order of procedure, but would also delay the introduction of any large production until September at which time the daily output of the Greater Seminole area may be expected to have declined to around 200,000 bbls.

This drilling plan may present another series of complications which will have to be ironed out by the committee and the umpire, but at least it offers another step which will continue to strengthen the production situation; and in the event that many of the wells to be started as a result of production discovered by any of the nine test wells, are dry, it will place the menace of potential production in the waste basket.

There has been one long-standing theory thrown in the discard by the test well plan, and that is that drilling in new pools cannot be controlled; and that when a couple of good wells have been discovered, a flock of derricks must result. The nine derricks south of Little River stand today as a monument to the efforts of the umpire and the advisory committee.

WEST TEXAS SITUATION EXPLAINED; UMPIRE URGED FOR OPERATIONS

By W. B. Hamilton*

The most striking fact gained from examination of the condition of the oil industry through the past eight years, or from 1920 to 1927, inclusive, is the inability of the industry to regulate, or rather adjust, its production of petroleum and petroleum products to its market needs.

The result is an overproduction which, though at times dropping to a small amount, has been felt nevertheless in every year save one of the past eight. The effect of this overproduction becomes worse as time goes on, because of its cumulative effect on the overproduction which has gone on before, and the staggering load which the surplus oil in storage constitutes for the industry.

The result has been a frequent and recurring demoralization of the second largest industry in the country, when legitimate profits have disappeared, and in many instances returns have gone below the cost of producing these products.

Such a condition is of immediate concern to a State with as large a share of oil production of the country as Texas. Texas, Oklahoma and California are producing today, and on the average have produced for several years, more than 80 per cent of the country's total yield of crude oil.

Texas' Share of Production

Texas' share is more than 25 per cent of that of the nation. Under normal conditions the oil industry vies with cotton as the chief money crop of Texas.

Only a small part of the oil produced in Texas is consumed in the State. The money return from oil is the principal source of capital for use in the development of the State. Unfavorable market conditions, produced by overproduction, cutting this income materially, affects thousands of land owners and laborers as well as oil producers, and materially cut the income of the State itself. The University and the school fund, being large land owners, are also adversely affected.

For this reason it behooves public officials and business men in all walks of life to examine into possible means of correcting this situation.

Prior to 1920, the principal concern of the oil industry, except for widely separated periods, quickly passed over, such as the flush days of the Cushing Field, was to find enough oil to supply an ever-growing demand.

Since that time, however, improved methods of finding oil, coupled with improved methods which make a barrel of oil go further than it did before, has resulted in an almost continuous overproduction. As before brought out, it has resulted in overproduction in seven years out of eight. For some time the oil industry endeavored to ride through the overproduction, expecting the pendulum to turn and even things up. However, it has not turned, and the industry now appears about to reap a day of reckoning which has been stored up for it all these years unless it finds some means of adjusting its production to the needs of the consuming public.

Importance of Imports

At the outset it should be made plain that in this discussion when production is referred to it means domestic production plus the oil imported, and when consumption is referred to, it means domestic consumption plus exports of oil and gasoline.

It is such elementary economics to consider the whole of the picture that this explanation would ordinarily be unnecessary. However, a coincidence that the size of the overproduction in this country last year and the amount of oil imported into this country is nearly the same, has recently led some oil men to claim that the whole burden of the overproduction lies on imported oil. They have accordingly leaped to the conclusion that there was no overproduction in this country, because as much oil is imported as was overproduced. They have failed to take into consideration the fact that approximately twice as much oil was exported as was imported. It is axiomatic that one cannot sell others without also buying from others, and that one can't sell in world markets without also buying there. We could not be exporters without being importers. In addition to our exporting twice as much oil as we import, our exports are almost altogether finished products, and our imports raw materials. By engaging in world trade, our refining plants are benefited by having the processing of these oils into refined products. Thus the part the American oil industry has played in foreign trade has been a benefit to the domestic section of the industry, instead of a hindrance.

Figures for All Oils

Figures of the United States Department of Commerce on the supply and demand for all oils show that for 1927 excess production was 64,087,000 bbls., a daily average of 176,000 bbls. Excess of daily average domestic production over daily average domestic demand was 368,000 bbls. per day or more than twice as much.

Domestic production	935,000,000
Domestic consumption	801,000,000
Overproduction	134,000,000

Now 1926 was the only year out of the past eight in which total demand exceeded total production. Demand exceeded production by 24,764,000 bbls. per year, or a daily average of 68,000 bbls. per day. However, considering daily average domestic production and daily average domestic demand the shoe was on the other foot, because domestic production exceeded by a daily average of 69,000 bbls. per day. "Boom" prices would hardly have prevailed without foreign trade, because without it, the only year in the past eight without overproduction would also have been one of overproduction without the foreign trade.

It is idle to contend that the American petroleum industry could let the 71,500,000 bbls. of foreign oil it imported last year go begging about the world for a market and still have held its position in the export trade. The only result of its going begging would have been that it would have weighed down world markets, and finally gone to other countries for other countries' workmen and refining plants to turn into finished products.

Reasons Against Tariff

In addition to this economic law against the importation of this oil, and its consideration in the supply and demand picture, there are several others.

First: It cannot be excluded without a tariff law against it. With only three States, and two of them always Democratic, producing more than 80 per cent of this country's oil and with 41 States consuming more oil than they produce—most of them producing none—talk of a tariff is idle.

Second: All of this oil comes from Mexico, Venezuela, Colombia and Peru. The great consuming territories of this country are on the Atlantic Seaboard. It is there the surplus oil production of Texas, Oklahoma, California and other States goes to market. And oil from Mexico, Venezuela and the other countries can move there as cheaply or cheaper than that from other districts. Venezuela oil is even nearer Bayonne, N. J., than that of West Texas. There is no escape from considering them in the same pot.

Third: Petroleum is the most important commercial and military resource in the world today. Nations of the world are reaching into every part of the world to increase their reserves of this material for their commercial and military safety. The only means by which the United States may participate in this is by the enterprise of its privately owned

*Before State Railroad Commission, Austin, Tex.

oil companies. They have managed to hold their own against companies owned by British and other nationals in securing a foothold in Latin America. It would be absurd to repay a service of importance to the future commercial and military security of this country to attempt to keep them from bringing oil obtained to this country.

In all of these countries, incidentally, oil production is curbed more radically than would be either necessary or possible in the United States.

Record of Overproduction

The amount of overproduction in the period of 1920 to 1927, both inclusive, is 410,459,000 bbls., according to the Bureau of Mines, United States Department of Commerce, which compiled the official report.

Status during those years is shown in the following table:

Year—	Prod. and Imports	Domestic Consump. and Exports	Stocks End of Year
1920	551,723,000	522,309,000	221,460,000
1921	600,959,000	519,301,000	285,277,000
1922	693,478,000	593,338,000	385,418,000
1923	832,015,000	730,228,000	472,858,000
1924	808,474,000	780,490,000	511,540,000
1925	841,892,000	811,739,000	541,693,000
1926	886,611,000	911,376,000	520,097,000
1927	1,007,527,000	943,170,000	584,184,000

This gives the following for overproduction in each year, and increase in stocks, which are the same:

1920	29,414,000
1921	81,658,000
1922	100,140,000
1923	111,787,000
1924	27,984,000
1925	30,153,000
1926	*24,764,000
1927	64,087,000
Total	410,459,000

*Excess of consumption and draft on stocks in this year.

It will be seen that while there has been a remarkable expansion of consumption, production has managed to keep ahead of it, except for a single year, piling unneeded oil on top of unneeded oil, until the total constitutes a useless load of well over $1,000,000,000, with an annual carrying charge which is probably in excess of $100,000,000. In only one year did it catch up—and that year was the one profitable year of the eight.

Shown in Percentages

Perhaps the picture can be represented more clearly another way by reducing production, consumption and stocks to smaller figures. Take 100 for each of these three figures in 1920. The increase of each using this as an index follows:

Year—	Prod.	Consump.	Stocks
1920	100	100	100
1921	109	99	129
1922	126	114	174
1923	151	140	214
1924	146	150	231
1925	153	155	245
1926	161	172	235
1927	183	180	264

While the results of this overproduction bulk large and constitute a heavy load after eight years, the figures show that the margin in recent years has been slight, and could have been removed with the oil industry given some chance to check the overproduction long enough for consumption to catch up.

Action Must Be Co-operative

In any other industry production can be checked by individual action. In the oil industry, owing to the peculiar nature of oil deposits, such action must be co-operative, and State agencies must recognize that fact. Recognition of the fact has been made to considerable extent in California and Oklahoma, and considerable progress has been made.

Imports and Exports

Year—	Imports— All Oil	Exports— All Oil
1918	38,943,000	*67,060,000
1919	54,161,000	62,852,000
1920	106,794,000	77,993,000
1921	128,776,000	70,723,000
1922	135,927,000	72,873,000
1923	99,608,000	100,410,000
1924	94,534,000	115,593,000
1925	78,149,000	109,803,000
1926	81,281,000	131,494,000
1927	71,508,000	141,539,000

*War year.

It will be seen that imports first began to play prominent parts in the picture in 1919. In 1920 the Mexican fields reached their height, and imports began to play a big part. It was this that broke the market which, coming with the general industrial reaction after the war, brought oil from $3.50 per barrel to $1. They began to increase until 1923 when Mexican production began to go to water, Mexican Government interference became acute, and the low prices in this country in 1923 came on. They have steadily declined ever since. In the meantime these imports created an antidote in an export market. The figures show what a life saver it has been for the past three or four years, and what the margin of overproduction would have been without them. It must be borne in mind, too, that imports are almost altogether crude, and exports almost altogether refined products.

This is particularly true of the State of Texas, since its oil resources, which are undergoing such heavy development, constitute a one-time crop, which, once gone, can never be replaced. It is important, then, that full value in the form of capital for development of the State be returned for it. Under present conditions these resources can be taken out with only a half return to Texas, and to the benefit, without return, of the rest of the world.

The fact that over 80 per cent of present oil production comes from the three States of Texas, Oklahoma and California, indicates that such effort as is being made will have to be by State action, and not by action which requires sanction of a majority of the other 45 States. Of these other 45 States only four, Arkansas, Louisiana, Kansas and Wyoming, produce more oil than they consume. The others, being primarily consumers, will undoubtedly be likely to consider benefits accruing to them as consumers as outweighing demoralized industrial conditions in oil-producing States.

PANHANDLE FIELDS

(Continued from Page 38)

1, was dry and abandoned at 1,252 feet. Pandem Oil Co.'s No. 2-A Curry was dry and abandoned at 1,148 feet. Phillips Petroleum Co.'s No. 9 Hickman was dry and abandoned at 1,315 feet. Preston and others' No. 1 Bush was dry and abandoned at 1,334 feet. Brock and others' No. 1 Brown County Fair Association was dry and abandoned at 1,642 feet. Dunninger and others' No. 1 Smith was dry and abandoned at 1,620 feet.

Callahan County

Mortimer & Benton's No. 1 Hickman was shot with 30 quarts at 505-21 feet and made 3 bbls. Humble Oil & Refining Co.'s No. 1 Hall was dry and abandoned at 3,870 feet.

Coleman County

Forster and others' No. 1 Davenport made 5 bbls. at 923-28½ feet. Roth & Faurot's No. 1 Sealy-Smith made 10,000,000 feet of gas at 2,646-63 feet. S. D. Owens' No. 1 Seals was dry and abandoned at 2,065 feet. Behout & Sullivan's No. 1 Yancy was dry and abandoned at 2,203 feet. Humphrey Brothers and Dozier's No. 1 Floyd was dry and abandoned at 1,845 feet. Location has been abandoned of Toombs & Eppler's No. 1 Chandler.

Eastland County

Gholson and others' No. 1 Powell was dry and abandoned at 3,730 feet. Parsons and others' No. 1 Howard was dry and abandoned at 3,065 feet. Same company's No. 1 Jones was dry and abandoned at 3,321 feet. Hosser and others' No. 1 Henry was dry and abandoned at 1,345 feet. Cranfill & Reynolds' No. 2 Turner was shot with 15 quarts at 1,291-1,314 feet and made 10 bbls.

Palo Pinto County

T. G. Shaw's No. 1 Marlow was shot with 30 quarts at 2,423-41 feet and made 100,000 feet of gas. Dalton Oil Co.'s No. 7 Dalton has been temporarily abandoned at 1,425 feet. Pan Refining Co.'s No. 1 Hitson has been temporarily abandoned at 550 feet. Same company's No. 1 Byer has been abandoned at 1,965 feet. Hill & Ritter's No. 1 Doan was dry and abandoned at 1,587 feet.

Shackelford County

A. C. Abbott's No. 1 Barkley has been temporarily abandoned at 400 feet. Nash & Windfohr's No. 1 Moberley was dry and abandoned at 1,350 feet. J. K. Simmons' No. 3 Harvey made 105 bbls. at 1,648-58 feet.

Stephens County

Pace & Ward and others' No. 7 Ball was shot with 80 quarts at 3,236-3,326 feet and made 4,500,000 feet of gas. Adamson & Fouts' No. 1 Bradford was drilled to a total depth of 3,595 feet and plugged back to 2,000 feet and the well is making 10 bbls. from pay at 1,953-79 feet.

ESTIMATED DAILY AVERAGE PRODUCTION
Week Ending March 10

Panhandle	
Carson County	7,035
Gray County	18,640
Hutchinson County	45,075
Moore County	10
Potter County	25
Wheeler County	925
Total this week	71,710
Total last week	72,625
Decrease	915
Wichita Falls	
Archer County	20,062
Baylor County	85
Clay County	487
Cooke County	3,470
Jack County	1,444
Montague County	9,118
Throckmorton County	998
Wichita County	26,139
Wilbarger County	10,395
Young County	9,188
Total this week	81,386
Total last week	80,544
Increase	842
Ranger District	
Brown County	12,915
Callahan County	3,970
Coleman County	1,745
Comanche County	1,320
Palo Pinto County	480
Ranger	9,426
Shackelford County	8,320
Stephens County	8,589
Total this week	46,765
Total last week	47,898
Decrease	1,133
Grand total this week	199,861
Grand total last week	201,067
Decrease	1,206

WICHITA FALLS DISTRICT COMPLETIONS

Week Ending March 10

Archer County

Birdwell Oil Co.'s No. 2 Burns was dry and abandoned at 1,536 feet. Cullam and others' No. 1 Anderson was dry and abandoned at 1,505 feet. Madden & Hunt's No. 1 Bearden was dry and abandoned at 1,146 feet. Mid-Kansas Oil & Gas Co.'s No. 1 Campbell was dry and abandoned at 1,353 feet. The Texas Company's No. 1 Garvey found the sandy lime at 751-58 feet and the well was shot with 5, 10 and 15-quart shots and had an initial production of 26 bbls. Fain-McGaha Oil Corp.'s No. 2 Wilson-A made 90 bbls. from pay found at 1,563-71 feet. Same company's No. 3 Wilson-A found the pay at 1,563-73 feet and made 110 bbls. of oil and 48 bbls. of water. D. O. Johnson and others' No. 1 Wilson-B made 155 bbls. at 1,555-70 feet. Kruger and others' No. 1 Parrish made 147 bbls. at 1,558-62½ feet. The Texas Company and Marland Oil Co.'s No. 1 Trubeville-C was completed at 1,516 feet as a key well for repressuring sand.

Clay County

Comac Oil Co.'s No. 1 Hawthorne was dry and abandoned at 2,149 feet.

Cooke County

Maer & Stainforth's No. 1 Fields was dry and abandoned at 2,003 feet.

Haskell County

Kouri and Healdton Oil & Gas Co.'s No. 1 Newcomb was dry and abandoned at 1,855 feet.

Jack County

Buttram Petroleum Co.'s No. 1 McClure was dry and abandoned at 3,025 feet. Hammon & Garrett's No. 1 Booth was dry and abandoned at 2,517 feet.

Montague County

Arco Oil Co.'s No. 4 Loy and others made 37 bbls. at 793-808 feet. Atlantic Oil Producing Co.'s No. 1 Jones was dry and abandoned at 1,802 feet. Bridwell-Heydrick and others' No. 5 McGaughy made 130 bbls. at 1,163-82 feet. Petroleum Producing Co.'s No. 3 Howard was dry and abandoned at 1,426 feet.

Wilbarger County

Fain-McGaha Oil Corp. completed three wells during the week as follows: No. 1 Waggoner-M was completed for 32 bbls. in pay found at 2,345-57 feet. No. 3 Waggoner-M found the pay at 2,352-66 feet and is making 140 bbls. No. 3 Waggoner-O made 48 bbls. in pay found at 1,288-95 feet. Lawson's No. 2 Waggoner-A made 125 bbls. from pay found at 2,379-99 feet. Murchison Oil Co.'s No. 1 Waggoner-F was dry and abandoned at 1,990 feet. Waggoner Refining Co.'s No. 1 Waggoner-F had a show of oil at 2,370-76 feet and was drilled to a total depth of 2,379 feet and made 25 bbls. initially.

Young County

Allday Oil Corp.'s No. 4 Johnson found the pay at 565-83 feet and made 15 bbls. Casey and others' No. 1 Boone was dry and abandoned at 585 feet. Kleiner and others' No. 3 Langston was dry and abandoned at 653 feet. Panhandle Oil Co. and others' No. 1 Pittman found the pay at 718-25 feet and made 71 bbls. the first 24 hours and 40 bbls. the second 24 hours. Riggs and others' No. 1 Street was dry and abandoned at 554 feet. Shappell Oil Co.'s No. 1 Johnson made 225 bbls. in pay found at 506-17 feet. Stafford's No. 2 Boone was dry and abandoned at 557 feet.

PANHANDLE COMPLETIONS

Week Ending March 10, 1928

Gray County

Empire Gas & Fuel Co.'s No. 1 A. Barrett, C SW Section 132, Block 3, I.&G.N. Survey, made 34,000,000 feet of gas at 2,580 to 2,730 feet.

Hutchinson County

The Texas Company's No. 1 Cockrell-B, Section 3, Block B-3, topped the pay at 3,015 feet and was drilled to a total depth of 3,120 feet and after a 60-quart shot at 3,040-55 feet the well swabbed 50 bbls. the first 24 hours. McMan Oil & Gas Co.'s No. 1 Albert Yake, SW cor. SE, Section 2, Block J, H.&G.N. Survey, had a show of oil at 2,990-92 feet in lime and swabbed 5 bbls. of oil and 500 bbls. of water. The well was drilled to a total depth of 3,012 feet where it was plugged and abandoned.

Wheeler County

The Texas Company's No. 2 D. Morgan, Section 92, Block 17, was drilled to a total depth of 2,520 feet and plugged back to 1,885 feet. The well had a small show of oil at 2,325-27 feet and is making 4,500,000 feet of gas from 1,835-38 feet, 1,858-62 feet and 1,880-84 feet.

PIPE LINE INCREASE IN OKLAHOMA IN 1927

Pipe line companies in Oklahoma increased their trunk mileage to 6,502.87, and gathering lines to 9,222.17 miles during the last year, according to a new survey just completed by the State Corporation Commission.

Refineries have 288.64 miles of trunks with 582.31 miles of gathering lines in the State.

Prairie Pipe Line Co. continues to lead the field with 3,807.61 miles of gathering lines and 982.78 miles of trunk line. Sinclair has 1,484 miles of gathering lines and 949 miles of trunk. Oklahoma Pipe Line has the greatest trunk mileage with a distance of 1,039.69, while gathering lines aggregate but 598.78 miles.

Major carriers and their mileage in trunks and gathering lines follow:

	Trunk	Gathering
Cosden	550.19	672.05
Crude Transit	11.92	7.83
Empire	389.60	249.97
Great State	35.82	.....
Gulf of Oklahoma	612.56	647.27
Healdton	50.40	.....
Marland	365.75	128.48
Magnolia	437.00	577.48
Noco	2.91	.....
Oklahoma	1,039.69	598.78
Ozark	570.00	117.00
Pierce	73.87	83.43
Prairie	982.78	3,807.61
Ryan	21.08	.....
Sinclair	949.00	1,484.00
Texas	412.30	844.30

TEAR DOWN ST. JAMES HOTEL

Many former Eastern oil men will be interested in the news that the historic old St. James Hotel in Bradford, Pa., is to be torn down after nearly 50 years of service to the public and in its place Miss Grace Emery, daughter of the late Lewis Emery, Jr., oil producer, transporter and refiner, will erect a six-story modern hotel to be called The Emery.

FEW IMPORTANT TRACTS AND MANY WILDCAT LEASES AT OSAGE SALE

The next sale of Osage oil leases, to be held in Pawhuska, Okla., on Wednesday and Thursday, March 28 and 29, commencing at 9:30 a. m. both days, was so arranged that both will be feature days. That is, important tracts will be offered on each day so that a good attendance of representative oil men interested in Osage tracts will be assured.

The sale will start Wednesday morning with tracts in Range 12, on the extreme east side of the county, following which the auctioneer will work westward, so to speak, until 128 tracts lying east of Range 7 will have been offered to bidders. It is expected that considerable of this acreage will be passed up so that most of the Wednesday afternoon will be devoted to the consideration of tracts west of Range 8, where the main interest will lie.

All of the second day will be devoted to the west side, commencing with Tract 306, NW Section 8-25-6, and working west to the Arkansas River and the Kay County line.

A very large proportion of the tracts west of Range 7 will be wildcat acreage, but some tracts of a very desirable character will be offered near already good leases on the east side of the Burbank Field, and it is expected that high prices will be paid.

Oil in "Naval Reserve"

There is much speculation as to how the trade will look upon the leases in the so-called naval reserve, where recently the Kay County Gas Co., while drilling for gas, opened up production in the Siliceous lime after missing pay sands found in other parts of the Osage Field.

One of these wells is in the C NE NE SW Section 22-24-7, and it was a 1,650-bbl. producer on an open-flow test. The pay lies from 2,834 feet, total depth 2,899 feet. At the coming sale Tracts 164, 165, 166 and 167, comprising all of Section 22, will be offered for sale on the first day. The well is on Tract 167. The fact that the production is from Siliceous lime is expected to lower the enthusiasm of oil operators for the three offsetting tracts, as the formation named rarely covers over 320 acres of productive stuff. However, the leases will command relatively large prices, but not the figure they would bring to the Indians were the sand Burbank or Bartlesville with a 1,650-bbl. well as an inducement. The other well, also drilled by the Kay County Gas Co., is in the C SW SE SE Section 9-23-7, and has not yet shown itself to be as good a producer as the well in Section 22-24-7. Tracts 153, 154, 155 and 156, the 640 acres around the well, will be offered. The well is on Tract 153. It found the Siliceous lime pay at 2,944-62 feet.

Good Burbank Tracts

In the Burbank area the two pieces which will attract the most interest, and incidentally the most money, will be the SE and SW Section 21-27-6. The Prairie Oil & Gas Co. and Oliphant bought the northwest quarter of Section 21 at the December sale, paying $300,000 for the tract. The first well completed averaged 362 bbls. a day the first week, 830 bbls. a day the second week, 750 bbls. daily the third week and 675 bbls. daily the fourth week. Then two more wells were completed and on Monday, March 12, the three wells were producing over 2,600 bbls. a day. Tract 351 is just south of this lease. Tract 350 is east of Tract 351, and north of the Kewanee Oil & Gas Co.'s $405,000 purchase last December. The last mentioned property has nine producing wells on it which at last report were making 4,655 bbls. a day. The first two wells on the property made 2,195 bbls. a day the first week. Then five completions made 2,761 bbls. a day, a sixth well brought the production to 4,209 bbls. and nine wells increased it to 5,034 bbls. a day for a week, falling to 4,655 bbls. as an average for the next week, which ended March 7. Tracts 350 and 351, therefore, cannot but be regarded as good and there should be lively bidding at high prices for these pieces.

A Rich "Finger"

There is a "finger" of rich producing Burbank sand starting in the NE of Section 20-27-6, working southeasterly from two to four locations wide through Sections 21, the NW and SW of Section 28, the NW and the S half of Section 34-27-6, NE of Section 3, SW of Section 2 and NW of Section 11-26-6, ending with two deep dry holes on the south line of the N half of Section 11. It is in this very desirable, although narrow, strip of pay that Tracts 350 and 351 lie, and it is safe to assume that a part of each of these tracts will be very productive. This 4-mile-long strip is cut off from the east edge of the main body of the field. A. G. Oliphant, geologist and oil producer, discovered and mapped out the trend of this "finger," and he created somewhat of a sensation late last fall when he completed a big well on the east side of a lease on which a dry hole had been drilled three locations west of it, a duster which was supposed by most oil men to mark the east limit of the field at that point. The discovery by Oliphant was a life saver for the Burbank Field, and at the December sale some fancy prices were paid for acreage in the trend he had mapped out.

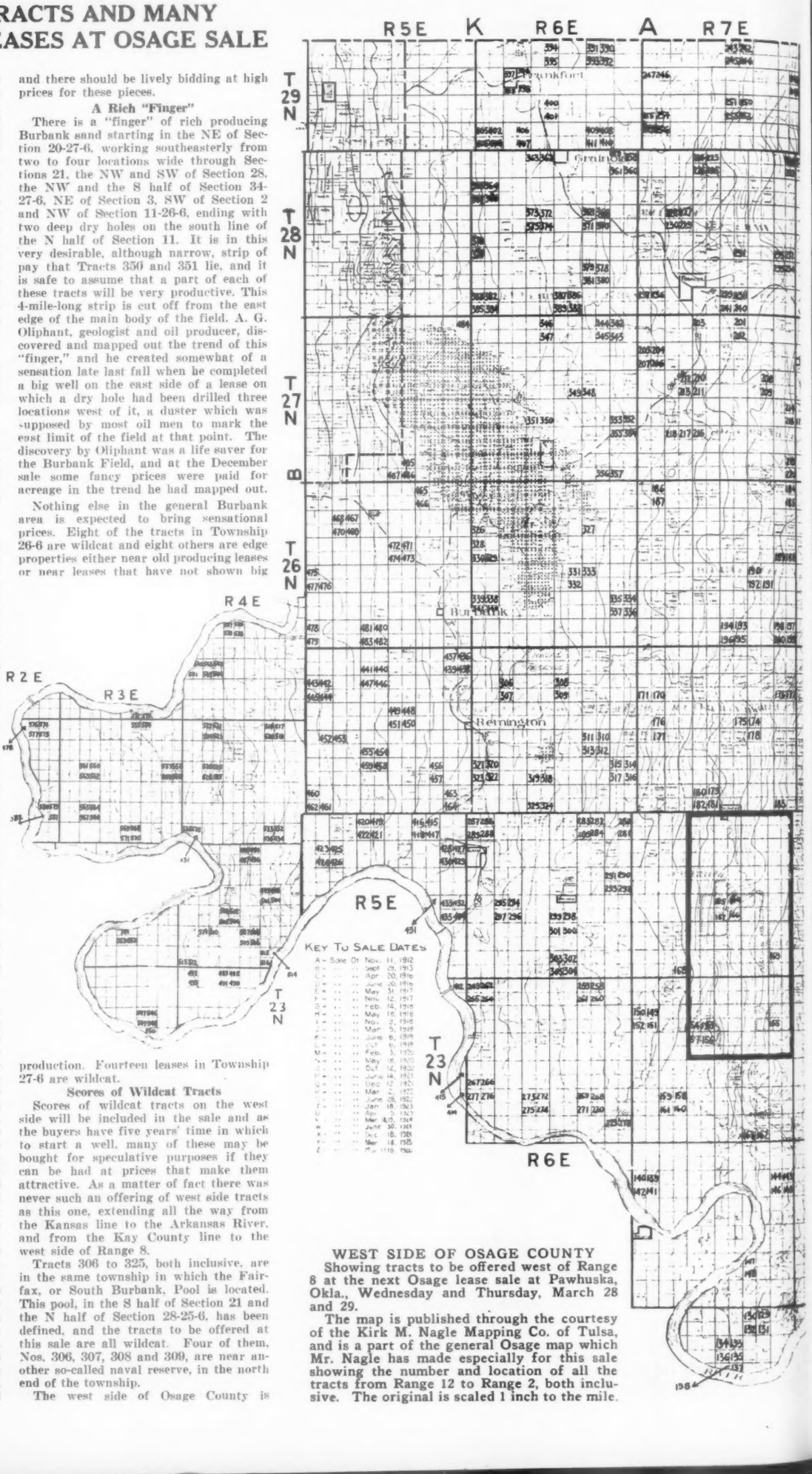
Nothing else in the general Burbank area is expected to bring sensational prices. Eight of the tracts in Township 26-6 are wildcat and eight others are edge properties either near old producing leases or near leases that have not shown big production. Fourteen leases in Township 27-6 are wildcat.

Scores of Wildcat Tracts

Scores of wildcat tracts on the west side will be included in the sale and as the buyers have five years' time in which to start a well, many of these may be bought for speculative purposes if they can be had at prices that make them attractive. As a matter of fact there was never such an offering of west side tracts as this one, extending all the way from the Kansas line to the Arkansas River, and from the Kay County line to the west side of Range 8.

Tracts 306 to 325, both inclusive, are in the same township in which the Fairfax, or South Burbank, Pool is located. This pool, in the S half of Section 21 and the N half of Section 28-25-6, has been defined, and the tracts to be offered at this sale are all wildcat. Four of them, Nos. 306, 307, 308 and 309, are near another so-called naval reserve, in the north end of the township.

The west side of Osage County is



WEST SIDE OF OSAGE COUNTY

Showing tracts to be offered west of Range 8 at the next Osage lease sale at Pawhuska, Okla., Wednesday and Thursday, March 28 and 29.

The map is published through the courtesy of the Kirk M. Nagle Mapping Co. of Tulsa, and is a part of the general Osage map which Mr. Nagle has made especially for this sale showing the number and location of all the tracts from Range 12 to Range 2, both inclusive. The original is scaled 1 inch to the mile.

dotted with blasted hopes in the way of deep dry holes but in selecting the acreage to be offered at the coming sale care was taken to steer as wide as possible from these tell-tale crosses on the county map.

Protest Disregarded

A protest against the coming sale was lodged with Hubert Work, secretary of the interior and the chairman of the Federal Oil Commission by the operators' committee in charge of the Seminole curtailment program. Particularly did the committee protest against the sale of the four tracts in Section 22-24-7. The protest in the form of a long telegram asked that if it was not possible to postpone the sale of these tracts that they be leased subject to an agreement that all wells drilled thereon be limited to a production of 50 bbls. a day. Up to this writing the committee had been given no encouragement in its effort to induce the Government to join the oil men in a practical conservation movement and the four protested tracts will go on sale with the others.

OPTIMISM CONTINUING IN GROUP 3 DISTRICT

(Continued from Page 28)

Texas for export during the week, but the Oklahoma market received very few inquiries.

The average prices on the four major grades of gasoline as reported by refiners in Oklahoma on sales made Monday to jobbers for both this week and last are shown below:

	March 5	March 12
58-60 U. S. Motor	.06178	.06268
60-62 U. S. Motor	.06597	.06619
60-62 400 endpoint	.06674	.06875
64-66 375 endpoint	.07125	.07250

Naphtha prices showed strength, but this was the result of that product carrying an alternate value as gasoline rather than any increase in the demand. Refiners have figured a differential between the cost of manufacturing U. S. Motor gasoline and naphtha and as the U. S. Motor price is advanced the naphtha price is advanced in proportion.

Kerosene and Distillates

The 41-43 grade generally sold at 4¼ cents and has shown a consistent strengthening over the past two weeks. This has been expected as a result of the relief given refiners a month ago when large volumes of the material were moved for export and with the coming of the increased spring demand fractionally higher prices are expected in conformity with the movement of the gasoline price. Some feel that kerosene demands will be below normal throughout the agricultural fields because gasoline is so cheap, the idea being that farmers will use gasoline in their tractors instead of kerosene and that might come about to a small extent, but there still is a differential of from 2 to 5 cents between the retail kerosene and gasoline prices, and where a tractor is designed to operate satisfactorily on kerosene it is not likely farmers will make a general change.

Distillates were weak and generally sold with a slight price concession. The sale of this material over March will be confined to scattered cars and prices will probably vary widely depending upon the position the individual refiners are in to make it or supply from stocks.

Natural Gasolines

The slow demand from refiners and the lack of an export demand has added weight to an already heavy natural gasoline market. The lower grades yielded more than the higher grades in the general weakness and in many cases material was being offered carrying price concessions one-quarter cent below the general market. Some C grade was offered at 3½ cents and unless that material would be removed from the market it was thought possible that other grades would be brought down in proportion, over the next week.

Gas Oil and Fuel Oil

Only the zero cold test gas oil was in better demand but the total volume moved was small in comparison to that moved during the cold winter months. There is no apparent rush on the part of refiners to increase cracking operations even with gasoline prices strengthening. At least, this tendency has not been reflected in the gas oil market. The price continued to be well-defined at 2½ cents.

Fuel oil continued to move at a good rate and the industrial demand is taken as responsible for the good feeling regarding the market over the balance of March. Many major buyers have been holding off on purchases, contending that the present prices are too high and out of line with the prevailing present high rate of production and the outlook for the future but, on the other hand, refiners claim they are pretty well sold up for the month and can not view the next two weeks' market, at least, with any thought of a decline in prices. The outlook for maintaining prices throughout April is decidedly uncertain and refiners are less optimistic about conditions that far in the future. A crude advance is looked upon as possible and serves as another factor in establishing optimism in the more distant future fuel market.

Lubricants and Wax

The slow demand for lubricants has prevailed for many months and a brisk movement during the next few weeks, during which time jobbers are expected to build up stocks for the summer season, will be needed to maintain present prices. Large stocks have been built up over this dull period and refiners are anxious to begin moving their production.

Wax demands were well divided between the domestic and export buyers but the market was meeting resistance to additional advances. The 124-126 grade was generally quoted at 3-3¼ cents with most of the sales being made nearer the low of the range.

OIL SECURITIES WERE SLUGGISH DURING WEEK

(Continued from Page 154)

398, equivalent to $2.17 a share (par $10) earned on 686,585 shares of stock in 1926.

Consolidated income account for year 1927 compares as follows:

	1927	1926
Gross rev.	$7,172,319	$8,424,622
Other inc.	132,315	317,549
Gros inc.	$7,304,634	$8,742,171
Expenses	3,952,275	3,790,544
Tax., int., abnds., etc.	1,674,566	1,654,873
Depr. and dpl.	1,739,162	1,805,356
Net loss	$61,369*	$1,491,398*
Dividends	258,109	686,144
Deficit	$319,478	†$805,254

*Income. †Surplus.

Consolidated balance sheet of Simms Petroleum Co. as of December 31, 1927, compares as follows:

Assets

	1927	1926
Prop., tks., plts., etc.*	$12,944,099	$12,705,120
Cash	492,685	1,400,517
Call loans	.....	300,000
U. S. trs. notes	.....	1,500,000
Inv. other cos.	552,808	548,642
Sink. fund cash	20,080	20,000
Acts., nts., and ac. rec.	969,596	1,246,334
Inventories	4,022,732	2,113,783
Def. assets	193,059	226,496
Total	$19,195,059	$20,060,892

Liabilities

Cap. stock†	$6,908,180	$6,865,850
Conv. notes	3,313,500	3,431,500
Due affil. cos.	.....	9,102
Accts. pay.	812,262	809,214
Accru. tax. etc.	188,885	153,267
Notes pay	310,000	.....
Divs. pay.	.....	343,292
Cont. and fed. tax res., etc.	1,265,022	1,731,970
Surplus	6,397,220	6,716,697
Total	$19,195,059	$20,060,892

*After depreciation and depletion. †Par value $10.

Thomas W. Streeter, chairman, stated net crude production was 15,102 bbls. daily, 49 per cent over 1926. Oil refined averaged 4,579 bbls., and casinghead gasoline production 4,415 gallons daily. Crude stored increased from 1,047,464 bbls. to 3,124,437 bbls. in 1927. In year 65 productive wells and 25 dry holes were drilled, against 130 producing wells and 46 dry holes in 1926.

Notwithstanding increase in oil produced, revenue from production was $5,309,866 against $5,977,944 in 1926, because revenue a barrel was 96 cents against $1.62 in 1926. Adjustment of crude inventory to market amounted to $286,849. Production expenses averaged 26 cents a barrel, against 40 cents in 1926.

The company erected 1,295,000 bbls. of steel storage in Church & Fields district, West Texas, and 165,000 bbls. in Yates Pool, Pecos County. On December 31 it owned 27 retail and 39 wholesale gasoline stations.

Mr. Streeter stated the company had maintained a strong current asset position, increased oil stored, expanded refinery and marketing departments, proved large reserves of oil in West Texas and was in position to profit from any improvement in general oil conditions.

Standard of California

Report of Standard Oil Co. of California, including Pacific Oil Co., for the year ended December 31, 1927, shows a net income of $40,210,952 after depreciation, depletion, Federal taxes, etc., equivalent to $3.19 a share earned on 12,594,098 no par shares of stock. This compares with $55,122,014, or $4.37 a share, in 1926.

Assets

	1927	1926
†Prop., plant. eq.	$455,666,279	$451,719,247
Spl. trust funds	.....	1,150,000
Investments	9,760,325	10,409,237
Cash & Call loans	25,540,067	‡17,022,869
Marketable secur.	1,050,579	.....
Accounts rec.	22,315,935	23,903,146
Oil inventories	53,578,122	57,534,581
Material & supplies	8,618,471	9,579,214
Other current assets	45,057	74,502
Deferred charges	2,733,183	2,410,548
Total	$579,308,018	$573,803,344

Liabilities

*Capital stock	$314,852,450	*314,852,450
Accounts payable	4,620,811	8,301,948
Gasoline tax pay.	2,153,407	.....
Accrued Fed. taxes.	2,965,000	4,600,000
Other current liab.	337,988	377,105
Deferred credits	2,586,756	2,788,393
Reserves	15,504,288	14,038,271
Capital surplus	170,790,086	170,567,637
Earned surplus	65,497,232	58,277,540
Total	$579,308,018	$573,803,344

*Represented by 12,594,098 no par shares. †After depreciation and depletion. ‡Cash only.

Consolidated income account for 1927 compares as follows:

	1927	1926
Operating income	$61,488,544	$70,840,636
Other income	2,075,774	*7,801,692
Total income	$63,564,318	$78,642,328
Depr., depl. etc.	20,053,366	28,670,314
Federal taxes	3,300,000	4,850,000
Net profit	$40,210,952	$55,122,014
Dividends	33,059,507	25,192,364
Surplus	$7,151,445	$29,929,650

*Includes $2,122,011 from sale of securities.

Consolidated balance sheet of Standard Oil Co. of California, as of December 31, 1927, compares as follows:

Report states that decrease of $9,352,092 in net operating profits was due to lower prices of crude oil and its products. Nonoperating income decreased $5,725,917 because in 1926 certain large nonoperating incomes in the form of profit on securities and liquidating dividends were made in connection with Pacific Oil and Pacific Gasoline Co.

Plant account was increased by more than $19,000,000 without additional financing while inventory of petroleum products decreased $3,956,458 in value, these products being carried at $1.036 a barrel at end of 1927 against an average of $1.098 starting that year. Cash increased by $8,417,776 and ratio of current assets to current liabilities of 11 to 1 compares with 8 to 1 at end of 1926.

CALIFORNIA MARKETS ARE STRENGTHENING

LOS ANGELES, Calif., Mar. 10.—There has been a slight firming up in the price of motor gasoline during the past few days. This has been especially noticeable in so-called distress sales which have strengthened as much as a half cent per gallon in some cases. Although the wholesale market is improving, the retail situation remains unsatisfactory. More and more signs can be seen offering gasoline at six gallons for $1, or cheaper. This figures about 16½ cents per gallon, tax paid, and it is believed that a situation of this kind cannot exist for long without resulting in some action by the larger companies. Some marketers believe, however, that these signs will not stay up for long and that the retail situation will improve materially in the next few weeks. It is rumored at this time that the larger companies are going to discontinue their present 6-cent contracts on March 29, and that from that day on, the tank wagon price will be 3 cents under service station price with an additional 1-cent margin to those stations which handle one company's products 100 per cent.

Natural gasoline is also developing some strength. The market has moved up fully 1 cent, spot sales being made at from 7½ to 8 cents, where a week ago the going price was from 7 to 7½ cents. It is noteworthy that one or two companies are refusing to quote on certain grades of gasoline pending developments expected in a few days. In general, the market, while actually strengthening, is still uncertain and will probably continue in this State for at least a week or two.

Fuel oil remains weak. Prices are soft and much difficulty is being encountered in moving this oil. Apparently stocks of fuel oil will continue to increase during the coming weeks.

NICHOLAS TO RETIRE AS PRESIDENT OF I.O.M.A.

CHICAGO, Mar. 10.—The annual meeting and election of officers of the Independent Oil Men of America will be held at the Stevens Hotel beginning Monday, March 19, and lasting for three days. The event of greatest interest is the choice of a successor to the retiring president, L. V. Nicholas, and the new organization. There will be no program for Monday morning, the only item scheduled being a meeting of the board of directors.

E. H. Hilp, chairman of the board, will deliver the greeting to members and guests, as the first event on the regular program in the afternoon session. He will be followed by R. A. Overholzer, assistant to the president, who will talk on the "Spread Red Eagle—Past, Present and Future." The retiring president, L. V. Nicholas, will address the meeting on "Building Constructively." During the afternoon, balloting by the Australian system will take place in a separate room. At the close of the session, announcement will be made of the result of the election.

On Tuesday morning the new president will announce the new organization, and he will be followed by other members of the new board of directors who will make brief talks. The afternoon meeting will be a continuance of the morning session and be devoted to organization building and planning. C. Y. Hinchey, advertising director, will make an address, his subject being "Full Identification—Modern Black Magic." Open-forum discussion is planned to take the remainder of the session.

Two full sessions are planned for Wednesday, with addresses by C. L. Henderson, vice president Vickers Petroleum Co., whose subject will be, "Advantages of Pulling Together"; by J. C. Nourse, president of the Nourse Oil Co., Kansas City, on "Profits From Team Work With Our National Brand of Red Hat Motor Oils." E. E. Jensen, manager of Red Hat motor oils, will address the meeting on "What I Find." J. S. Hoagland, manager of the refinery sales department, will close the talks, speaking on "Refinery Sales Department—and Why." After any unfinished business the incoming president is to make a brief talk and outline his plans under the theme of "Looking Ahead."

The gathering is planned to be a meeting of business men bound together in an organization by business reasons. There will be no evening sessions, no formal dinner for the membership nor any entertainment provided by the organization.

INSULATED TANK CARS HAVE NEW FEATURES

(Continued from Page 149)

safety relief valves. The dome cover, when closing the car, is dropped into place and rotated, causing two lugs on the inner flange to engage two lugs on the dome flange ring preventing the lifting of the cover. The bolts are then swung into position and the nuts tightened which forces the dome cover on the gasket and flange ring in the dome making it vapor tight.

Many Industries in Debt to Petroleum

Immense Quantities of Cement and Steel Consumed in Various Departments of the Oil Business. Other Manufacturers Benefit.

By Thomas F. Smiley

It may seem a trifle vainglorious to consume further time and magazine space in discussion of the dominating position which oil occupies among the great industries, but why leave a job half finished? And why select the modest violet as a guide and exemplar?

In a recent issue of The Oil and Gas Journal attention was directed to the part petroleum has played in the spectacular growth and prosperity of the automotive machinery industry. Wouldn't it be well to extend the discussion by at least one more article?

This thought prompted an approach to the news editor's desk and the query, "Don't you think that another little article about the commanding place which the petroleum business holds among earth's greatest institutions might be a good thing at this time? There's been a lot of gloom over the low price of oil, you know, and although it looks as if we had turned the corner some of the fellows are still down in the mouth. Now something to remind them that the oil business is one of the world's wonders in point of magnitude and indispensability might help to brighten them up and restore their old-time cockiness, don't you think?"

To which the n. e. replied as he scowled darkly at columns of production figures, "Good enough subject. Go on and write your head off, but"—and the scowl deepened—"see if you can't cut out the bull."

So, thus authoritatively commissioned and with the method of treatment clearly prescribed, it is purposed to indicate how some industries besides the one of making automobiles and trucks owe a distinct debt to petroleum.

Many Indebted to Oil

The story of steel, dramatic in high degree, would have been startlingly different but for the tremendous amount of business handed to it by oil. The cement industry is one of those which might make a profound bow in the direction of the oil derrick and utter a feeling "Thank you." The names of others, according to sources ordinarily regarded as trustworthy, but not guaranteed, if typewritten and placed end to end, would reach up one side of a 120-foot derrick, over the crown block and down the opposite side to the third girt from the bottom. You can tell from this way of putting it—easily recognizable as the statistician's favorite method of aiding in the visualization of a fact—that a quiet and profitable hour might be passed in perusing the roster of industries which owe their place in the sun, or part of it, to petroleum.

We spoke of cement. Let's take a look at that cohesive industry.

Take the Seminole Field as an example. It is stated that the investment in cement for use in actual oil operations there or directly attributable to the development of that area has amounted so far to $1,500,000. Of this it is estimated that $637,000 was expended in drilling operations alone. There are some 1,300 wells in the field, the drilling of each by rotary requiring about 700 sacks of cement at an average price of 70 cents a sack.

Tons upon tons of cement were consumed in making foundations for derricks and various buildings needed on the oil leases, piers for the warehouses, foundations for pumps, engines and other machinery and for making private roads and sidewalks.

Additional Uses

Vast quantities were used, in addition to all this, in the construction of roads and sidewalks and foundations which, though not contributing directly to the production of oil, would not have been needed but for the opening of this field. It is estimated that the gusher well which in July, 1926, started a stampede toward the Seminole area resulted in the consumption of 2,142,857 sacks of cement which if it had not been for the aforesaid gusher would have had to look around for something or somebody else to consume them. Quite a heap of cement, isn't it? Probably enough to provide pavements and concrete foundations for a city of 25,000.

And mind you the practice of using immense quantities of cement in the drilling of oil wells is just getting well under way. It is asserted by men familiar with the subject that eight times as much cement is being used in the oil fields of California and the Mid-Continent as was used two years ago. This amazing increase is attributed to the substitution of the rotary drilling outfit for cable tools, all casing being set with cement when the former is used.

From 450 to 800 sacks of cement are used in each rotary-drilled well in the Seminole Field. In the deep holes of California, 1,000 to 1,200 sacks are required for setting casing. Four of these sacks make a barrel.

Refineries and gasoline service stations are heavy consumers of cement.

In this connection it should be borne in mind that enormous quantities of cement utilized for paving and general construction purposes in cities whose welfare is indissolubly joined with petroleum must be marked up for the oil industry. Take a city like Tulsa, Okla., for instance, where virtually all the buildings of every kind, including all the great office, bank, store, church and school structures, the private homes and the apartment houses, with the mountains of cement used in their construction, owe their existence to the oil business.

Tank Bottoms Too

One of the comparatively recent uses which the oil industry has found for cement is the construction of bottoms for tanks to replace the steel ones damaged by the corrosive action of crude oil of high sulphur content. In this case there is introduced into the cement a compound which causes it to set quickly and makes it adhere to the steel sides of the tank.

While road building, street paving and general construction work lead of course in the consumption of cement, it is stated by representatives of the cement manufacturers that in California and the Mid-Continent oil field states the petroleum industry comes next to these in point of cement used, with the demand growing.

Now it is not meant to imply here that the cement industry would stagger helplessly for a while and then collapse if the producers, refiners and distributors of petroleum and its products were to withdraw their patronage—if, for instance, they were to take it into their heads to use discarded wads of chewing-gum in place of cement. But it is meant not merely to imply, but right vigorously and unqualifiedly to assert, that such action on the part of the oil industry would be a fearful wallop to the cement manufacturers.

That sounds belligerent. It wasn't meant to be. It just seemed to be a handy way of saying that the cement industry, like a lot of others in that parade over the derrick top and down to the third girt, owe much to petroleum. And nobody would be more ready to concede this patent fact than the cement manufacturers and dealers themselves.

Fortunes in the Well Hole

We mentioned steel. Doubtless many persons never stop to think of the fortunes spent for iron and steel that is underground in the form of oil well casing and tubing. Incidentally, after all this casing and tubing have been run into the earth a dry hole oftentimes is the only reward. To be sure, the pipe can be salvaged, but 25 per cent must be marked off for depreciation, for as a rule after such pipe has been used four times it has to be junked. Take the Carter Oil Co.'s well on the J. W. Rogers lease in Logan County. That well went to a depth of 6,200 feet and was a dry hole. It contained 200 tons of iron and steel. What this cost the Carter company can be conjectured only, of course, but taking the market prices for pipe as a guide, it is safe to assume that it represented an outlay of about $23,500.

This thing looks intriguing. Let's do a little more figuring. The office statistician offers the information that there are 320,000 oil wells in the United States and that it would be fair to put their average depth at 1,500 feet. That would be a total of 480,000,000 feet, wouldn't it? And if there are still 5,280 feet in a mile as there were in the more or less dear old school days, then the oil well holes of this country if placed end to end (that sounds foolish, but statisticians insist it's the only thing to do) would make a continuous hole 9,000 miles long. If that hole started in Muskogee, Okla., it would emerge somewhere near the University of Pekin, China, and project some thousand miles into the Oriental atmosphere.

High-Powered Imagination Needed

There seems to be something faulty about this illustration even though it is built in strict accordance with the standard specifications, for it is a bit difficult to visualize a hole projecting into the atmosphere. However, we won't cavil over details like that, for it would interfere with the object of this plunge into mathematics, which was to bring out the fact that in this 9,000 miles of oil holes there is nestling a little matter of $2,000,000,000 in the form of tubing and casing. Perhaps the steel industry has been trying to keep this secret. Anyway it is time to toss it out into what campaign orators call the pitiless light of publicity.

Now all that is underground, hidden from view, and every well in every oil field tells a story of the same kind, varying of course in the size of the figures as to tonnage and cost. Getting out in the open now and trying to fashion some sort of estimate as to the amount of steel consumed by the oil industry, we find ourselves in a labyrinth of facts and figures that set the imagination whirring like an A-battery charger.

If you begin to set down the various steel products used in the production, transportation, refining and distribution of petroleum you find yourself wondering what else there is to keep the steel mills going aside from nutpicks and safety razors—and perhaps oil men are the heaviest users of these too.

Steel Everywhere

Think of it! Right at the beginning we see the derrick, the rotary or cable tools, the wire line, the drill pipe, the bit, the engine, the boiler, the mud pump, various accessory devices, countless nuts, bolts, screws, nails—just about everything used in the process of drilling except the rotary hose, and even that is reinforced with spiral steel wire.

Then after surveying the drilling process and striking oil—or getting a dry hole—shall we try to catalog the steel used in the further phases of production and in the storing, transporting and refining of the crude and the distribution of the thousand and one things made from it? It would be a long job. There are great herds of steel tanks, which in the aggregate cost more than $300,000,000. There are oil tankers, representing an investment of $600,000,000, sailing the seven seas. There are intricate pipe line systems, thousands of miles of them, handling in the neighborhood of 1,000,000,000 bbls. of crude yearly. These pipe lines alone represent an outlay of more than $900,000,000. There are thousands of buildings constructed of steel.

Billions of dollars are invested in refineries. Consider what a large part of it went for the stills, pumps, boilers, engines, condensers, tanks, pipe lines and treating and loading equipment. Then there is the equipment needed to market the gasoline, kerosene and other petroleum products. Steel is drawn on heavily here.

Consider the myriad of machines, special devices and accessories used at every stage of the oil cycle from spudding in to delivering case goods in steel containers—the chains, cables, couplings, valves, fittings, tongs, jacks, pipe brushes, sockets, nipples, bradenheads, fishing tools, washers ... Let's quit! It makes one's head swim.

A Foolish Question

Is oil a very, very important contributor to the steel industry's magnitude? Foolish question, isn't it?

Now two industries only have been dealt with here, cement and steel, and these only sufficiently to indicate in a small way how much both owe to petroleum.

Give thought for a moment to the hundreds of other industries, big and little, that look to oil for much of their business if not to keep them going altogether. There are great banks whose clientele looks like Who's Who in the Oil World. There are the manufacturers of all the different kinds of equipment made from iron, copper, steel, glass, aluminum, brass, lead and what-not.

There are the makers of gears, hoists, bottles, meters, thermometers, gauges, indicators, and a host of scientific instruments found in the research department of every major oil company. There are the manufacturers of belting, paint, brick, tile, lumber, barrels, rope, wire, wrenches, hammers, sledges, crowbars, gaskets, asbestos, compressors, fire extinguishers, rust preventives, welding appliances, shovels, cars, cans, office furniture, chemical compounds, etc.

Late Fields

(Continued from Page 40)

ing. The Snowden & McSweeney wildcat, No. 1 Tiger, in Section 13-7-6, is flowing 2,957 bbls.

In the Allen Field in Pontotoc-Seminole Counties, the Mid-Continent Petroleum Co.'s No. 2 Fleet, NW cor. NE NW SE Section 7-5-8, is flowing 625 bbls. daily.

The Oklahoma Corporation Commission on March 12 ratified and extended the shutdown in the Greater Seminole district, and by a ruling made all previous orders regarding oil production and shooting in the Little River Pool and territory south, effective until April 1, 1928.

Under the ruling, the daily output is not to exceed 450,000 bbls. for the entire region, and shooting may be done only upon application to the Seminole advisory committee and the umpire. Ray M. Collins, umpire in charge of the field, is continued in office as an agent of the commission.

Natural Gas Industry Never So Active in Oklahoma as in 1927

The year 1927 showed greater activity in granting natural gas franchises in Oklahoma than any previous year, according to the annual report of E. F. McKay, manager of the Oklahoma Utilities Association, at the tenth annual convention, held in Tulsa March 13 and 14. The report showed that 24 Oklahoma towns had granted franchises last year and that most of them received service.

One company laid 125 miles of 20-inch main across northwestern Oklahoma to provide Texas Panhandle gas for its distribution system in Kansas, Missouri and Oklahoma and another company laid 35 miles of 12-inch to double its central Oklahoma connection with the Chickasha producing field. A third company laid about 40 miles of main trunk line across southwest corner of Oklahoma to transport Texas Panhandle gas to its market in large cities in northern Texas, the report showed. Other companies, the report continued, in western, south-central, eastern and northern Oklahoma expanded their transportation systems to safeguard service in their respective communities and to reach communities not previously served.

The report sounded a note of warning to Oklahoma gas companies when it said that "while these projects involved investments indicating that the engineers and bankers regard gas service as safe for a future of many years, it will be noted that the major projects mentioned, and another from the Texas Panhandle Field to Denver with probability of still another to Omaha, indicate a tremendous drain upon that producing area, and urge the advisability of encouraging Oklahoma gas companies to adopt every conceivable plan for protecting the Oklahoma market."

The convention was held in the Mayo Hotel and included general sessions and group meetings. The use of electrical power in the oil fields and the group sessions on gas were of interest to oil and gas men and the two gas group sessions were well attended.

The association includes a natural gas, electric light and power, telephone, electric railway and manufacturers and supply men's division, each of which was given a place on the program. The convention closed with a banquet and entertainment at which the principal address was given by Charles A. Eaton of Plainfield, N. J.

SHREVEPORT REFINED OIL MARKET CONTINUES FIRM

SHREVEPORT, La., Mar. 12.—Refined oil products from gasoline to fuel oil continue to hold the strength they have manifested during the last two or three weeks. The advances anticipated during the week did not appear. However one local refiner said he may advance U. S. Motor fuel one-eighth cent and kerosene a like amount in a day or two.

There is very little if any of the latter product available at 4¾ to 5 cents and refiners are in the market for the product to meet their orders. With gasoline at 6½ cents getting stronger and demand almost up to capacity they are not cutting kerosene, turning as much of the raw material into gasoline as they can.

Gas oil is showing a little strength at 3 to 3¾ cents with many inquiries for both straw and dark grades. Fuel oil is steady at 97½ cents to $1 and moving as rapidly as it is turned out. Arkansas refiners report a shortage of gasoline to meet their orders with the price at 6½ to 6¾ cents, an advance of an eighth over quotations a week ago. A tightness in kerosene at 4¾ to 5 cents parallels the Shreveport situation and gas oil is active at 3⅜ to 3½ cents for 32-36 straw and 28-30 at 2⅞ to 3¼ cents. Dark gas oil is 2⅝ to 2¾ cents. Fuel oil appears a little weaker at 85 to 90 cents for 16-22 gravity grade.

LONG STRING OF TUBING PERFORMED ODD STUNTS

Many odd things are seen in oil fields but when The Oil and Gas Journal photographer saw nearly 1,500 feet of tubing wrapped around trees and scattered gen-

erally for a distance of 350 feet from a well between Maud and St. Louis in the greater Seminole area of Oklahoma, he unlimbered his camera and took a shot. The above shows part of what he saw.

Tremendous rock pressure encountered in the Independent Oil & Gas Co.'s No. 2 Hamby, Section 14-7-4, while tubing was being run, started the trouble. The weight of the tubing may be calculated from the fact it was National 2-inch, 4.70-pound A.P.I. seamless external upset tubing, with a packer on the bottom. The hole was 3,650 feet deep and there were 64 joints of tubing in the hole, or a string 1,482 feet long.

When the pressure was encountered, the tubing started winding out of that hole, going up through the derrick, gathering trees in its embrace, and covering the landscape in beautfiul curves and knots. Although it was bended and twisted in all sorts of shapes, it is claimed not a single joint of the casing was broken.

SALES TO GOVERNMENT HELD TAXABLE BY TEXAS

AUSTIN, Tex., Mar. 10.—The Texas State Supreme Court has held that gasoline sales made to military reservations of the United States Government are taxable and do not constitute interstate commerce, as claimed by the Grayburg Oil Co. The suit was brought by the State after the Grayburg Oil Co. presented the argument that it was acting as agents of the Federal Government and not subject to pay the regular gasoline tax. The case was originally tried in the district court and the State was given the decision. This was just upheld by the Supreme Court when the decision was made giving the State judgment for approximately $14,000 as tax and interest on the deliveries of about 1,000,000 gallons of gasoline at a time when the 1-cent tax was in effect.

It is understood that the case will be appealed to the United States Supreme Court. While only $14,000 is at stake, it is a test for sales which involve hundreds of thousands of dollars in taxes in the State, as large quantities of gasoline have been sold the Federal Government for its military bases and flying fields, principally in and around San Antonio.

When the case reaches the United States Supreme Court it will present two issues, one, the general validity of the act taxing gasoline and the other whether that tax applies to sales to the Federal Government delivered on military reservations. A decision of the latter presupposes the holding of the tax valid by the court, which would be at variance with the judgment of the Illinois Supreme Court.

FRENCH OIL MONOPOLY BILL PASSES CHAMBER

A petroleum commission which will control the importation of oil products into France is created under a bill adopted by the Chamber of Deputies. The bill must still go to the Senate.

The commission will have the power to prevent, except by special license, petroleum importation by any single house from any source in quantities exceeding 300 tons a month.

Several amendments were introduced that would have permitted discrimination against big foreign companies in favor of smaller concerns controlled by the French government. These were rejected. It was declared that the French companies could not assure a continuous supply of oil and that consequently it was necessary to count on the great petroleum interests.

In the course of debate Deputy Margaine made an attack against what he termed "American oil trusts mixing into French petroleum affairs." This brought a denial from the Minister of Commerce, who was upheld by the chamber, 318 to 202, on a vote of confidence.

PRESIDENT STILLMAN'S IMPERIAL OIL REPORT

CHATHAM, Ontario, Mar. 10.—Shareholders of Imperial Oil, Ltd., at their annual meeting in Toronto re-elected directors for the ensuing year. President C. O. Stillman reviewed the operations of the past year as follows:

"Imperial Oil, Ltd., is indirectly affected by the condition of overproduction and low prices of crude through its association with the International Petroleum Co., which is a large producer of crude in Peru and Colombia, and directly through the results which follow these conditions in the refining and marketing departments of its own business. In general, it may be said that the low prices of petroleum products have allowed refiners to obtain little compensation from the low prices of crude. Three-fourths of the cost of gasoline is represented by manufacturing, transportation and merchandising costs which, except to the extent that they may be affected by economies in operation, are in the nature of fixed charges. In addition, the overproduction of petroleum products which has followed a continued annual surplus of crude in the United States has effected a general leveling down of prices, which has militated against profits comparable to those of many other branches of industry.

Big Gain in Output

"Notwithstanding this increased competition, Imperial Oil, Ltd., has secured one of the largest gains in output of its products in its history. The percentage of its increases in gasoline sales has exceeded the percentage of increase in motor car registrations throughout the country. The more widespread use of the motor car, favorable weather and motoring conditions, excellent crops and enlarged tourist traffic, were contributory causes; but the great volume of the gains in gasoline, lubricating oils and other products is directly due to increased distribution facilities, greater popularity of products, to advances in refining methods and advantages in access to the highest grades of raw materials. This is notably true in respect to our manufacture and national distribution of ethyl gasoline in anticipation of the general use of high compression motors and in our exclusive possession of Peruvian crude, the highest quality of raw material for the manufacture of Marvelube motor oils.

"In the six refineries at Halifax, Montreal, Sarnia, Regina, Calgary and Vancouver, the company manufactures 381 different products for the Canadian trade. As all crudes have varying characteristics, it is necessary, in order to attain the highest degree of excellence in these products, to utilize 23 grades of crude of different chemical and physical qualities.

"These crudes originate in Canada, the Mid-Continent, Wyoming, Montana and California fields of the United States, Colombia and Peru in South America and Mexico. Each of these grades of crude requires different technique, necessitating great flexibility in refining equipment.

During the year 18,000,000 bbls. of crude were processed, and through the research department progress was made which will be of great value in the future.

"The development of the petroleum areas of Alberta has made steady progress during the year, and a more widespread interest has been evinced in the production of that district. Much of this interest has been aroused by the production of the Royalite No. 4 well, which has made an unique contribution to the country's aggregate production of petroleum. In 1924, approximately 2,500 wells throughout the Dominion—but largely in Ontario—produced a total of 169,773 bbls. of crude. The performance of Royalite No. 4 affords a striking comparison with this figure. In 1925 the well produced 168,722 bbls.; in 1926, 200,469 bbls.; and in 1927, 217,862 bbls., which represented roughly some 55 per cent of the entire Canadian production over that period.

Coming Year's Commitments

"For the coming year our commitments will call for a daily production of 3,000 bbls. of low cold test and 18,500 bbls. of high cold test oil from the Peruvian Field.

"Medical and sanitary service has been maintained at a high standard of efficiency in both Colombia and Peru, and no serious illness is reported among our employes. A new hospital is being constructed at El Centro, Colombia; the company is much concerned in improving the standard of health of its native workmen and in the construction of modern camps which embody the most modern thought in sanitation.

"In 1927 the company's fleet, including that of International Petroleum Co., Ltd., operated to capacity, and together with chartered vessels transported over 22,000,000 bbls. of crude oil and finished products, or an average of some 60,000 bbls. per day throughout the year."

CLASSIFIED WANTS TOO LATE TO CLASSIFY

RECEIVER'S SALE
Iowa Park Refinery

On Tuesday, March 20, 1928, at 2 p. m. at the court house door, Wichita Falls, Texas, N. H. Colwell, Jos. P. Tumulty and C. H. Gannon, ancillary receivers of Interstate Gasoline Company, acting pursuant to orders of the United States District Court at Dallas, Texas, will offer for sale for cash to the highest bidder, the following described real and personal property:

FIRST, the equipment of a complete refinery of 2,000 bbls. average daily capacity at Iowa Park, Texas, including steel tanks—one 55,000, two 20,000, one 10,000, two 2,500, two 1,000 bbl., six rundown tanks and one agitator.

SECOND, the east 15 acres of all that part of the SW one-fourth of Section No. 19, Tarrant County School Land Survey, lying south of the R. of W. of the Ft. W. &D.C. Railway immediately west of Iowa Park, Texas, and being the land on which the said refinery is located.

THIRD, blocks 19 and W½ of 20 in the Texas Addition to the town of Iowa Park, Wichita County, Texas, and on which is situated the 55,000-bbl. steel tank belonging to said refinery equipment.

Abstract of title and full description of property to be sold may be examined prior to sale at the office of Mr. C. H. Gannon, ancillary receiver, at 905 Scott Avenue, Wichita Falls, Texas, where also full details of sale may be obtained.

Under order of court the receivers have the right to sell the properties described herein either jointly or severally as in their judgment at the time may seem to the best interest of the estate, and they also reserve the right to reject any and all bids.

Dated: Wichita Falls, February 11, 1928.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

NEON ELECTRIC DISPLAY SIGNS

Can you give me a description of the principles of the neon lights which are being used for signs and how the different colors are made? Is the gas used in these lights obtained from natural gas?—M. W. D.

The feeble ghostly glow set up in tubes, filled with various rarified gases, known as Geisller tubes, by an electrical discharge through them has impressed students for many decades, but the industrial application of this principle to modern lighting problems is very recent. An outline of the facts involved in the operation of neon display signs has been given by D. H. Killeffer in Industrial and Engineering Chemistry, news edition, from which this information is abstracted.

The chemically inert gases form ions under the influence of an electric discharge and the luminosity which they assume under proper conditions yields light of definite wave lengths without the aid of filters of any kind. Not only is electrical energy thus easily converted into luminous energy but a quite insignificant part of it is wasted in the form of radiant or sensible heat. The use of mercury vapor under very low pressures as the gas in such a tube has long been commercially applied to the production of light rich in ultra violet and containing a predominance of visible light in the shorter wave-length bands. The inactive gas, neon, similarly produces luminous radiation but with a decided predominance of the longer visible wave lengths in the red and orange end of the spectrum.

The innumerable electric signs which, by the brilliance of their colors, irresistibly attract one's attention on every side in the larger cities, are modern versions of the old familiar Geissler tube.

The tubes must be finished perfectly tight electrically and with respect to the contained gas, and the tubes and electrodes must be carefully freed from occluded gases, whose presence would later affect both the chemical and electrical characteristics of the lights.

The current requirements vary from some 15,000 volts to 1,500 volts. For carrying this energy conveniently into and out of the tubes, large electrodes are required to prevent undue heating of their surfaces and these are ordinarily enclosed in bulbs somewhat larger than the tube itself.

The composition of the gas mixture in the tube controls the color of the light produced. Neon produces a brilliant red light. Mercury vapor produces a blue-violet, which becomes a brilliant blue when argon is mixed with it. By placing an argon-mercury mixture in a fluorescent greenish tube a very satisfactory green color is produced. A white light is produced by using helium or by mixing neon with argon and mercury vapor in a fluorescent tube.

The rare gases neon and helium are present in the atmosphere but are found in larger quantities in many different samples of natural gas. Some gas wells yield much larger quantities than others.

INFORMATION ABOUT PIPE LINES

I will consider it a favor if you will send me the names and addresses of publishers of books on the construction, operation and maintenance of pipe lines for transporting oil.—S. M. G.

Material about the construction, operation and maintenance of pipe lines is scattered in numerous publications of a general nature about the petroleum industry. There is some good information in Day's Handbook of the Petroleum Industry. You will find helpful material in publications of the United States Bureau of Standards and the Bureau of Mines.

The Oil and Gas Journal published October 7, 1926, a special edition entitled "Crude Oil Transportation of North America." This collection of articles with illustrations and material is considered to be the most comprehensive compilation of material in regard to the construction, operation and maintenance of pipe lines ever published. This collection of articles was prepared by the best known authorities in the United States and if you will turn to your copy, you will no doubt find there the special information that you may be seeking.

GEOPHYSICAL METHODS FOR LOCATING OIL STRUCTURES

I would like to know where I can secure detailed information regarding the use of geophysical instruments, including use, the results, and perhaps some details of the construction of the instruments, that would show conclusively their nature as compared with "doodle bugs" and other supposedly "electrical personal magnetism devices."—J. W. E.

There have been several articles in The Oil and Gas Journal on this subject. The geophysical methods of today are based on the use of very delicate instruments by competent experts for the location of favorable conditions for oil deposits. We cannot say that these methods actually locate oil, because all that is claimed for them is that in proper hands unfavorable locations may be eliminated. Nothing can take the place of the bit for locating gas and oil. The geophysical instruments include a number, all of which are designed according to well-established principles of physics and the known properties of rocks and minerals. They have no connection or relation with bugs, twigs, or personal magnetism devices.

The article by Mr. Andrew M. Rowley, Employ Science in Search for Oil, which appeared in The Oil and Gas Journal, December 1, 1927, describes some of these instruments and tells how they are used. The Bureau of Mines has published Technical Paper 420 in which geophysical methods are discussed.

INDUSTRIAL USE AND SOURCE OF CASTOR OIL

What are the principal industrial uses for castor oil and what sections produce it at this time?—L. E. W.

Castor oil is insoluble in gasoline and the fact that it does not decompose under high pressure and temperature makes it a good lubricant for certain types of motors. The fact that it is soluble when compounded with some other substances has caused large quantities to be used in the preparation of artificial leather, in the manufacture of linoleum, in the dye industry, and for the fabrication of rubber goods. Some high grade typewriter inks contain castor oil. It is used in the varnish industry and for making fly-paper.

Prior to the war India furnished 95 per cent of the world's castor bean supply; with the rise in the economic position of the bean, however, this figure is gradually declining. While the eastern hemisphere looks to India and China to support its laurels, Brazil cultivates the largest acreage in the western hemisphere. It is ready to increase its production as needed. The crop grown in the Argentine is estimated at between 7,000 and 10,000 acres, and in addition to these, the Central American countries, including Mexico, are well adapted for cultivation of the bean. So well are they adapted, in fact, that it is said they could supply the United States' need without difficulty, should anything happen to the Indian crop.

QUANTITY AND PRECAUTIONS IN BLENDING TETRAETHYL LEAD

What quantity of the pure substance is added to gasoline when adding tetraethyl to gasoline and are special precautions necessary for handling it and making the blend?—R. P.

Tetraethyl lead is added to gasoline in proportions necessary to bring the fuel to a fixed antiknock value. As the knock rating of gasolines varies with the character of the crude oil and the method employed in manufacturing gasoline, the quantity of the tetraethyl lead fluid which may be required necessarily varies. The quantity used is reported to be from about one-half cubic centimeter to 2.5 cc. per gallon, and while some gasoline may need more than the maximum stated, the matter of cost and selling price prevent the use of larger quantities.

Special precautions are advisable in the handling of tetraethyl lead and the ethyl fluid. The rules laid down by the War Department indicate the nature of these precautions, a part of which follows:

When the content of tetraethyl lead in ethyl gasoline used in military service is in excess of the proportion of 1 to 1.260 by volume for commercial tetraethyl lead * * * a special report will be made to the War Department.

Mixing ethyl fluid with gasoline except for certain specific requirements, such as research, military and naval use, and air mail service, is done only at the main distribution centers and in not less than tank car lots. Adequate provisions are made at each such center for thorough mechanical distribution of the ethyl fluid throughout the gasoline, and the efficiency of such distribution is controlled by the analysis of samples.

When ethyl fluid is mixed with gasoline at military stations, report will be made to the War Department showing the names of the persons engaged in mixing, the method adopted, and the apparatus used. As few persons as practicable shall be employed in this work. No person shall be engaged in mixing until adequately instructed as to the mechanics of mixing, the dangers, and the precautions to be taken.

All mixing shall be done with the maximum ventilation practicable under the weather conditions existing at the time.

Operation of the pumps shall be instantly stopped at the appearance of a leak or other defect, and no attempt shall be made to repair or disconnect the system until a qualified man takes personal charge of it.

Floors of all places where any possibility of spilling is present are to be provided with drains and proper facilities for making possible a complete flushing out of all spilled fluid, or in their absence provision shall be made for chemically neutralizing any spillage. No bulk mixing station shall be dismantled or disconnected for repairs except by a qualified man.

Kerosene or other efficient means of preventing skin absorption of lead tetraethyl, and washing facilities shall always be conveniently available.

The rules and instructions affecting the employes shall be posted in a conspicuous place where the ethyl fluid is being handled.

DESTROYING MOTHS WITH PETROLEUM PRODUCTS

Have you any information about a special preparation, made from petroleum products, for killing clothing moths?—A. C. R.

Kerosene and gasoline are used to some extent for destroying moths, but they are objectionable because of the odor which may be retained in the material.

The Department of Agriculture has perfected a fluid containing compounds which may be prepared from petroleum; these are ethylene dichloride and carbon tetrachloride. This preparation contains three parts by volume of ethylene dichloride and one part by volume of carbon tetrachloride, and is said to be very effective against moths and other insects.

The method of applying it is to place the clothes to be protected in an air-tight closet or other container in which the fluid is placed, higher than the clothes, in an open dish, and to leave the container closed for two days or more.

There is another preparation which has been developed at the Mellon Institute, composed of cinchona alkaloids in proper solution. These alkaloids have been tested under very severe conditions and are said to have demonstrated exceptional power as moth repellants. They are inodorous; they adhere to the materials to which they are applied; can be put on evenly like a dyestuff; they are not apparent on the materials treated; they do not dust off; they do not affect undesirably the physical properties of textile fabrics; they can be made soluble in expensive organic solvents, such as petroleum naphtha, as well as in water; they are nontoxic to human beings; they are valuable clothes moth repellents and are economical to use industrially.

HARNESS OIL

Will you kindly tell me what kind of lubricating oil is suited for treating leather, such as harness oil?—R. G. L.

The ordinary preparation known as harness oil is usually a compounded product containing tallow and neatsfoot oil. The proportions are about three parts of beef or other good tallow to which is added one part of pure neatsfoot oil. The oil being added to the hot tallow. When a good black dressing is desired it is the practice to add sufficient carbon black as the coloring medium.

without

LEAK SEEP *or* SWEAT

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SMITHWELDED OIL CRACKING STILLS

And such are the words used by the head of a large oil company in a telegram describing the condition of their Smithsteel Cracking Stills after 2 years of continuous and severe service.

This company is now using hundreds of Smith-welded Stills—all made by the Patented Smith method of Electric Welding.

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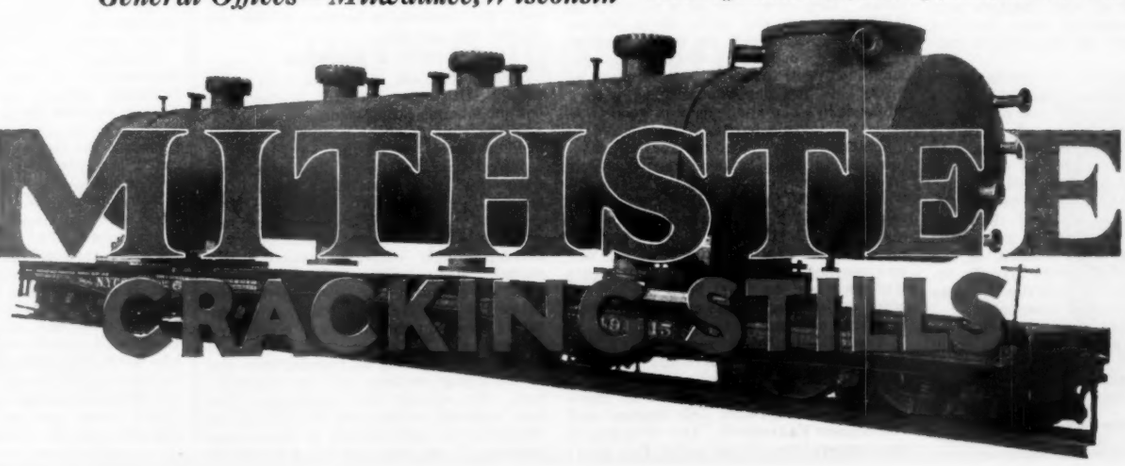


Modernization of Cylindrical Stills

Changes in Fire Boxes Greatly Increased Capacities With Many Operating Economies. Suggest Application of Internally Fired Still

By C. W. Stratford*
Associated Oil Co.

During the past few years, the necessity for development work has been generally recognized by executives throughout the oil industry, resulting in greatly accelerated progress and the adoption of many noteworthy improvements in refining methods and equipment.

Several years ago the Associated Oil Co. decided to improve distillation methods with the object in view of reducing refining costs. This extremely interesting work was entrusted to the writer. As the principal collaborator, W. J. James, now chief of research of Studebaker, was chosen, and he contributed much during his two years stay, to the development work that has followed. Appreciation is hereby expressed to the Associated Oil Co. for permission to make disclosures of the details of distilling equipment.

Oil Circulation

On the oil side, use is made of a centrifugal pump to jet the oil against the heated sheet, thereby creating a high velocity sheet flow over the entire fired area. Such a pump is one of the most efficient machines, so far developed, for moving fluids. The oil, under pressure, impinging on the transfer surface at high velocity, furnishes a continuous sheet of liquid in intimate contact with it, for the efficient absorption of heat as rapidly as it can be transferred. The continuous sweep of this liquid sheet over the transfer surface keeps it scrubbed clean and reduces the temperature of the oil film in actual contact with the metal, maintaining a minimum temperature difference between metal and oil.

On the gas side, a forced draft fan, feeding air to the furnace, furnishes energy, first for intimately mixing the oil and air, and second for continuously spinning the combustion gases under the full length of the still. The function of spinning the combustion gases is to move the gas-film in contact with the still, and thus promote increased convection transfer over the entire bottom.

Our experience has shown that the heating capacity or transfer rate per square foot in shell stills with oil circulation is equalled by very few oil refining heaters of other types and probably exceeded by none.

The fired bottoms of such shell stills, exposed to radiant heat at the highest temperature levels, in the combustion zone are immune from coking or other heating surface troubles. This is true also with direct flame impingment against the bottom.

The application of oil circulation to shell stills makes possible the most efficient combustion with highest flame burst temperature and lowest excess air. The thermal efficiency of such heaters may be raised to any practical value, justified by the price of fuel and the allotted payout time.

The cost of applying oil circulation to otherwise obsolete bottom-fired shell stills is materially less than the cost of equivalent heating capacity in any other present type of heater. It may be of interest to state here, the reason why we undertook the modernization of shell stills rather than install pipe stills which were available and much more efficient than our old stills. The cost, then, of pipe stills was high and the abandonment of the large number of shell stills already installed was considered inadvisable from the standpoint of capital investment.

In the beginning, close contact with operating personnel developed much friendly opposition, which had a distinctly stimulating as well as a sobering effect. Many operators asked how we could hope to better shell stilling of petroleum when these heaters had been developed by the industry and used for a period of over 50 years without material change.

*New York meeting, A.I.M.E. Copyright, American Institute of Mining and Metallurgical Engineers.

ECONOMICS IN REFINING

In petroleum refining the principal requisites of good economics are the separation of high-priced distillates from those of lower price; maximum yield of any desired distillate; lowest capital investment in refining equipment; lowest cost of operation and maintenance; and the best adaptability and flexibility of the same refinery equipment for handling crudes of widely varying characteristics. The first two items mentioned, separation and yields of distillates, are determined by efficiency of fractionating equipment. Discussion in this paper is chiefly concerned with oil heating equipment, combustion and fuel economy.

It has long been well known that velocity plays a very important part in all heat transfer systems. Any betterment in special transfer rates in such systems must always involve velocity. Realizing this fact, we decided to adopt as a basic principle, the employment of energy to impart velocity required for high transfer rates through a heating diaphragm.

Our method of modernizing obsolete shell stills is founded on this principle. Mechanical energy is usually cheap and its rational expenditure is returned in the form of greatly increased heat transfer rates, on both oil and gas sides of the sheet. Certainly there is nothing new in this principle, the only novelty being that of our peculiar method of application.

Installation Method

Most of the first period was passed in experimenting with combustion methods and desirable fire box construction and learning what had to be done to an ordinary centrifugal pump to convert it into a pump which would unfailingly and efficiently handle boiling oil. The first four stills equipped were 10 feet in diameter and 40 feet long. Against the bottom of each, 750 G.P.M. of oil was pumped. A charging capacity of 5,300 bbls. was attained, vaporizing about 42 per cent. This was a throughput of more than five times the former capacity of the still without agitating steam. Each of these stills, so equipped, was operated as a single continuous distilling unit charging crude in and taking main vapor and residuum out. Side walls of the furnace under these stills were air cooled, delivering air to the wind box at approximately 300 degrees Fahrenheit.

Following the first installation, six stills 12 feet by 45 feet were equipped with oil circulating pumps, discharging 1,100 G.P.M. against the bottom. No radiant or convection coils were applied. These stills were operated as individual units. They were run at a capacity of 6,500 bbls. per day each, 40 to 50 per cent being vaporized. A trial of potential capacity of a few hours duration was made during which time a throughput of 9,400 bbls. per day was reached with a single still. The application of good fractionation to this battery has resulted in a material increase in recovery of gasoline and in improved overall realizations on distillates.

The last 12-foot by 45-foot still was equipped with a circulating pump having a capacity of 3,600 G.P.M. at 35 pounds pressure. A rate of 9,200 bbls. per day was reached with this still but the rate was decreased to 8,500 bbls. per day in order not to overrun the capacity of fractionating equipment.

A small tubular convection bank was applied to this still. Average gas temperature entering the convection bank is 1,200 degrees and temperature of gases out to stack, between 585 degrees and 700 degrees Fahrenheit. The variation in the temperature of the outlet flue gases is determined by the temperature level of the oil pumped through the convection bank. Radiant tubes were applied along the front face of the bridge wall to prevent anticipated overheating of the bridge wall and to absorb heat from the end of the flame burst. The radiant coil is miply an addition to the radiant absorbing surface of the still bottom. Operation has shown the tubular radiant surface to be unnecessary, though possibly useful, as a separate heater with certain flow hook-ups of the distilling unit.

In equipping all of the 11 stills above with oil circulation we naturally encountered many unforeseen difficulties. While our anticipation of probable capacity of heaters seemed too high to many during the design stage, in every case, we greatly underestimated capacity actually attained. Owing to the present inadequacy of old flues and stacks, to handle the greatly increased volume of flue gases, and the limitations imposed by some vapor handling and exchange equipment, it has been impossible, so far, to determine the top capacity of any of these heaters. However, with flue gas economizers installed, it is the writer's conservative opinion that the probable charging capacity of an outside fired, 12-foot by 45-foot still, running refined crude, and vaporizing approximately 50 per cent, lies somewhere between 10,000 and 12,000 bbls. per day.

Results of Operation

The first result of operating oil circulation stills attached to fractionating equipment and running on refining crude was the shut down of a number of shell still batteries and pipe still toppers.

Direct fractionation of distillates eliminated need of re-run stills. The expanded distilling area thus suffered a very profound contraction for the same normal throughput. It was also necessary to correspondingly contract operating personnel. Many boilers formerly fired for generating steam for distillation were taken off the line since the use of agitating steam in the stills was eliminated. Present use of steam is restricted to bringing heaters up to running rate and to stripping sections of the fractionators. The overall fuel consumption has been reduced to less than one-half of old requirements, now varying on the average between .9 per cent and 1.3 per cent by volume. In the last two years, the total cost of distilling refining crude has been reduced by over half. Regarding service factor, it is interesting to note, that the last oil circulation still, in continuous operation, has required no cleaning since it was first fired in June, 1927.

In general, shell stills have an advantage in that a large surface of oil is exposed in them to free evaporation. Though many refiners may object to fire hazards involved in shell still operation, with oil circulation against the bottom, this hazard is reduced to a negligible minimum.

Water Problem

Our California crude petroleum is not the easiest type of oil to distill. It is wet, when charged to the stills, which causes a perceptible increase in fuel rate. California crude is considered dry when it contains only 1 per cent of water. The water content usually varies between 2 and 3 per cent. This water, in the crude, contains much salt which rapidly fouls the tubes of heat exchangers. Salt crystals in the residuum within the still tend to fuse to the fired sheet at high firing rates and thereby to create hot spots. That was the compelling reason for increasing the quantity of oil jetted against the bottom in the last still constructed. This about concludes the story of outside fired and inside circulated shell still heaters.

In practically all development work, it is oftimes discouraging to sense the rapidity with which our most cherished conception of something seemingly new passes into near-obsolescence. This frequently occurs during the period between completion of design and readiness for operation. Such a situation is always certain to obtain in any industry which has been unusually slow to apply some of the time-worn facts long since recognized by other industries.

Suggest New Method

With the background of facts established by commercial operations, above disclosed, and profiting by experience had during the development period, the writer wishes to propose another reasonable forward step and apply what appears, now, to be an even more economical method of modifying shell stills. On referring to an analysis of past installation costs of outside fired oil circulation stills, it is seen that expenditures made for raising the stills and rebuilding masonry into satisfactory fire boxes with air-cooled side walls and floor, represent, as in similar furnace construction, a high percentage of the total cost of modification. This analysis naturally suggests the desirability of finding ways and means of reducing or preferably of entirely eliminating the cost of rebuilding old shell still settings. Where present fire boxes are satisfactory for increased firing rates additional masonry cost is eliminated.

Turning to other lines of endeavor for inspiration, we find the scotch boiler equipped with a firing tube and the burner set directly in the end of it. No trouble is experienced with the maintenance of the fire tube and high transfer rates are obtained to nonmechanically moved water.

All over Europe there are hundreds of shell stills equipped with one or two firing tubes. The standard Brunn Koenigfelder type of shell still used in Europe is approximately 30 feet long, 10 feet in diameter and fitted with two firing tubes 32 inches in diameter. The surface of two such tubes is greater than that available, on the same still when placed above a fire box and fired on the outside in the normal way. Combustion for B.K. type stills is accomplished in a Dutch oven attached to the front of the still and the incandescent gases pass

(Continued on Page 168)

UNITED
BRADFORD
RIG IRONS AND STEEL EQUIPMENT

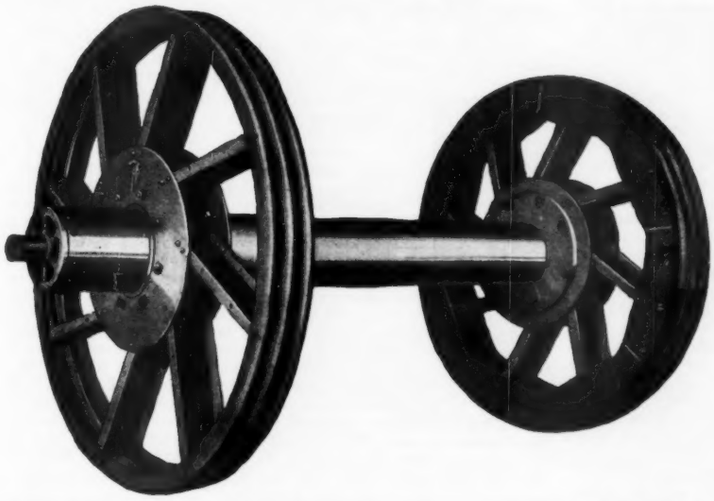
CALF WHEEL

BAND WHEEL

TUG WHEEL

BRAKE WHEEL

BULL WHEEL SHAFT



STEEL BULL WHEEL

"UNITED-BRADFORD" Bull Wheels are manufactured in sizes of 7½′ and 8′ diameter, with 9″ and 12″ face Brake Wheels, and equipped with shafts 16″ or 18″ in diameter with wall thickness of ⅜″, ½″ or 1⅛″. The arms of the wheels are riveted to steel flanges, eliminating the attaching of arms to shafts. Assembling is done by placing wheels on shafts and bolting the steel flanges to the hubs. All bolts are easily accessible and nuts can be tightened with ordinary wrench. No part of these wheels can get out of line through rough handling in transporting. The more important features of "United-Bradford" Bull Wheels are the Ease of Assembly, Dependability in Design and Construction, Perfect Alignment and Balance — insuring smooth-running equipment that will operate satisfactorily for years to come.

GREAT QUANTITIES USED THROUGHOUT THE MID-CONTINENT FIELD

Throughout all Mid-Continent fields, and in Texas, Arkansas and Louisiana, "United-Bradford" Rig Irons and Steel Equipment are in wide-spread use, providing an unexcelled service and satisfaction that causes them to be preferred by many operators.

WIRE—WRITE—PHONE

UNITED IRON WORKS, Inc.

Sales Office TULSA, OKLA. 114 N. Rosedale

Kansas City, Mo. (General Offices)

Sales Office DALLAS, TEX. Magnolia Bldg.

STOCKS MAINTAINED AT THE FOLLOWING POINTS

KANSAS	OKLAHOMA	ARKANSAS	TEXAS	
Madison	Covington	El Dorado	Spearman	Trent
Eureka	Tulsa	Smackover	Pampa	McCamey
Winfield	Okmulgee		Panhandle	Pyote
Keighley	Seminole		Borger	Odessa
Hutchinson			Shamrock	Santa Rita

Of Interest to Sales Departments

NEBRASKA MARKETERS INCREASED GALLONAGE

Practically all of the major marketing companies operating in Nebraska showed substantial increases in their gallonage sales for 1927 compared to 1926 but their percentage positions were generally unchanged. There was a slight tendency for the smaller marketers to get a greater percentage of the total, with a large increase in the number of jobbers. In 1927, the marketers outside the group of the 25 largest sold 44.65 per cent of the gasoline while in 1926 they sold 42.54 per cent, according to the summary of state inspection reports included in the Nioma Bulletin, the weekly publication of the Nebraska independent oil men. The Bulletin points out that with the exception of the Standard Oil Co. of Nebraska, all marketers selling 1 per cent or more of the State's total showed a decrease in their percentage sale for the year compared to their 1926 sales. The Nebraska marketing situation in 1927 as summarized by the Bulletin is as follows:

"Sixteen oil companies sold over 1,000,000 gallons each for the year. They totaled 95,588,104 gallons or 52.25 per cent of the year's total.

"Forty-nine oil companies sold an average of 3 to 8 cars per month. They totaled 21,745,585 gallons or 11.80 per cent of the year's total.

"Seventy-one oil companies sold an average of 2 to 3 cars per month. They totaled 16,409,684 gallons or 9.00 per cent of the year's total.

"Two hundred sixteen oil companies sold an average of 1 to 2 cars per month. They totaled 30,294,432 gallons or 16.50 per cent of the year's total.

"One hundred seventy-four oil companies sold an average of one-half to one car per month. They totaled 12,779,280 gallons or 7.00 per cent of the year's total.

"Ninety-three oil companies sold an average of less than one-half a car per month. They totaled 2,797,100 gallons or 1.55 per cent of the total.

"Out-of-State dealers, importers by tank wagon, state jobbers who quit or sold out during the year, and those who imported gasoline for their own use only, totaled 3,218,500 gallons or 1.9 per cent of total.

"There was a net gain of 102 jobbers for 1927; in 1926, 83 new jobbers started business, making 185 new jobbers in two years. In 1927, 67 farmer's co-operative companies sold 8,272,300 gallons of gasoline, or 4.52 per cent of the total year's business. In 1927, 11 Nebraska companies which had direct connection with refineries, sold 86,540,194 gallons as compared with 76,690,767 gallons sold by the same 11 companies in 1926.

The list of the 25 largest marketers is shown below, together with the per cent of the total gasoline sold by each during 1927 and 1926.

Company—	1927 Gallons	1927 Pct.	1926 Gallons	1926 Pct.
Standard Oil Co.	42,347,303	23.16	34,083,705	22.48
Sinclair Refining Co.	11,274,938	6.16	11,313,707	7.43
Continental Oil Co.	9,402,485	5.16	7,919,150	5.26
Manhattan Oil Co.	7,451,718	4.07	7,186,918	4.72
The Texas Company	4,845,020	2.65	5,453,786	3.59
Nicholas Oil Corp.	4,562,699	2.49	4,357,940	2.86
National Refining Co.	3,187,978	1.74	2,825,666	1.86
U. S. Oil Works	2,440,291	1.33	2,309,596	1.52
Skelly Oil Co.	1,702,576	.93	1,344,387	.88
State Oil Co.	1,509,682	.82	1,416,680	.93
Farmers Paint & Oil Co.	1,462,680	.80	1,290,120	.85
Shaffer Oil & Refining Co.	1,178,058	.64	873,229	.57
Western Nebraska Oil Co.	1,092,837	.59	463,037	.34
Osborne Oil Co.	1,057,822	.58	783,516	.52
Nebraska Oil Co.	1,056,098	.58	724,178	.48
W. B. Watson Co.	1,015,919	.55	1,065,337	.70
White Eagle Oil & Refining Co.	862,942	.47	865,198	.56
Lincoln Oil Co.	839,266	.46	610,907	.40
A. B. A. Oil Co.	673,612	.37	642,901	.42
Lewis Oil Co.	649,579	.36	406,789	.26
Gordon Oil Co.	649,242	.36	411,071	.27
Walker Oil Co.	645,904	.35	(Not operating)	
Mead Oil Co.	640,663	.35	333,421	.20
Linderman Brothers	625,053	.34	527,936	.35
Lute H. Morse	616,393	.34	68,186	004
		55.65		57.45

Short Talks on Refinery Products

By W. T. Ziegenhain

HOW CYLINDER STOCK IS MADE

After the gasolines, kerosene and all other oils are distilled off of the crude, the residue remaining in the still may be either fuel oil or cylinder stock. Ordinarily refiners do not make cylinder stock because special crudes are needed and are not readily available. Cylinder stock is in reality a lubricating oil; and while it is used only for lubricating heavy working parts, and does not need to pass the more exacting specifications usually outlined for motor oils and industrial oils, it is necessary that it have lubricating value and be free of sediment. In general, crudes produced in the Pennsylvania and Mid-Continent Fields, the so-called paraffin-base crudes are used. The crude is chosen for color and sediment content. It must have a light green color and be practically free of sand, salts or tarry residue. The operations of the stills is modified also when cylinder stock is made. Large quantities of steam are jetted into the still to keep the oil well agitated and to eliminate oxidation as much as possible. The steam also holds the wax in an amorphous state, and in that way minimizes caking and increases its lubricating value. Stock made in that manner and not further processed is called steam-refined stock, and is used for heavy work. When a better grade is needed, and the tarry residue content of the steam-refined stock is excessive, it may be chemically treated and a large part of the tarry matter removed. This is usually done by treating with sulphuric acid and then neutralizing with caustic. This treatment does not remove any of the wax, however; and should a low cold-test stock be needed, it may be diluted with naphtha and dewaxed to be made into bright stock, but the processing of bright stock will be discussed in another issue of The Oil and Gas Journal.

AMERICAN KEROSENE SUPPLYING CHINESE

By Charles E. Kern

WASHINGTON, D. C., Mar. 10.—United States furnishes 88 per cent of the kerosene imported in China according to a report by Samuel Sokobin, American Consul at Foo Chow, China, to the Department of Commerce. This percentage figure is based on the available data for 1926.

The report shows that refiners in United States during 1926 sold 206,922,990 gallons of kerosene to Chinese buyers. The next largest seller was Sumatra with a total of 15,589,234 gallons. Borneo followed with sales totaling 5,943,923 gallons with Persian refiners fourth with a total of 1,030,857 gallons. A total of 3,504,957 gallons came from other countries. Japan and Russia which previously had been factors in the China market did not sell material in 1926.

The following table gives the yearly kerosene shipments from refiners in this country to China:

Gallons	Per Cent of Total	Value U. S.
107,446,239	68	$ 25,972,820
48,249,297	44	15,296,400
157,293,525	79	49,376,247
140,690,547	74	49,952,395
134,771,826	76	34,115,255
175,823,711	84	43,721,814
179,739,245	83	39,522,454
177,342,689	79	37,640,476
220,344,268	85	47,447,942
206,933,990	88	38,112,288
1,548,524,337		$381,158,033

D. M. DAY TRANSFERRED

NEW ORLEANS, La., Mar. 10.—D. M. Day, for the past eight years superintendent of the Norco refinery of the New Orleans Refining Co., has been transferred to Wilmington, Calif., where he will be assistant superintendent of the Shell Oil Co. refinery. Mr. Day will be succeeded by I. M. Hemphill, who has been head stillman at the Martinis, Calif., plant of the Shell company. Mr. Day came to Norco at the time the plant was built.

SUPERTEST CORPORATION

CHATHAM, Ontario, Mar. 10. — At the annual meeting of the Supertest Petroleum Corp., held at London, Ontario, recently, the retiring directors were re-elected. J. G. Thompson, president of the company, in his annual address reported net earnings for 1927 of $188,000, compared with $80,000 in 1926, an increase of 135 per cent. The company has no bank debt and has on hand $226,000 in government bonds.

TANK CARS IN SOUTH AFRICA

South Africa is contributing a share in the fast-growing foreign consumption of petroleum products as seen from the increasing number of tank cars being placed in use there. Five years ago, six tank cars adequately handled the imports of gasoline at Durban. This number will be increased to 50 through orders already placed for delivery during 1928, and 15 more will probably be ordered as the imports of gasoline increase to 2,000,000 per month, the expected average for the year.

GASOLINE BIDS RECEIVED

CHICAGO, Mar. 9.—The Chicago Post Office Department of Motor Vehicle Service will receive bids for supplying the gasoline requirements of the service for the quarter beginning April 1 at 10 o'clock a.m., March 8. Bids will be tabulated and the list of bidders and their offers made public later. The present holder of the contract is the Seneca Oil Co.

SAN ANGELO COMPANY BUYS FILLING STATIONS

SAN ANGELO, Tex., Mar. 9. — The San Angelo Refining Co. has inaugurated an expansion program with the purchase of six filling stations and one bulk station in San Angelo for $100,000, the opening of two tourist camps, and filling stations at a cost of $10,000, the erection of nine new stations at an outlay of $45,000 and the leasing of 11 other stations at various points in West Texas.

The announcement of the expansion was made by R. P. Humes, vice president and general manager. The San Angelo stations were taken over March 1. The refinery bought six filling stations and a bulk plant from J. W. Belcher for $100,000. These are in San Angelo. The refinery had been operating two stations in the city, one at the refinery and another down town.

Outside of San Angelo the company's is opening service stations and tourist camps at Sonora and Ozona, ranch towns situated on the old Spanish trail. Each of these stations cost $5,000. A new drive-in station has just been completed at Barnhart, and one at Miles, each with a wholesale department and costing about $5,000 each. New stations are also being built by the refinery at Eola, Rowena, Menard, Junction and Paint Rock.

The company has leased 11 stations in Glasscock, Sterling, Coke, Runnels and Irion Counties, and will operate them from the San Angelo office, though no change in the personnel will be made.

The company has recently taken over the agencies for Quaker State and Marathon oils in 18 counties of this territory. The refinery is now manufacturing two grades of gasoline, the regular motor fuel and a special product for high compression motors. A special kerosene is also produced.

TO USE AIRPLANE

The Texas Pacific Coal & Oil Co. has purchased a Meteorplane, manufactured by Irwin Aircraft Co., at Sacramento, Calif., for experimental purposes, and the plane will be flown shortly from California to Fort Worth, Tex., and will be used in the sales promotion of Amo oils.

In addition to this small plane, the company contemplates the future purchase of a larger plane of the cabin type.

Frank Drew has been appointed manager of the aviation department of the Texas Pacific Coal & Oil Co. in Fort Worth to develop the sale of Amo special aero motor lubricating oils, and to co-operate with airplane engine manufacturers and pilots in all questions of airplane engine lubrication.

"RED INDIAN GAS" PREMIUMS

CHICAGO, Mar. 9.—The Indian Refining Co., Lawrenceville, Ill., on March 1 made the price at which its "Red Indian Gasoline," was sold uniformly 2 cents higher than U. S. Motor gasoline at the point of sale. Previously the gasoline had been selling at a premium of 2 cents at some points and at 3 cents at other points in the territory.

NEW REFINERY FOR PERU

A bill will be presented to the Peruvian government asking that permission be given to erect a refinery there. The refinery will operate as a Peruvian company but will be financed and built by United States capital. It is understood the Bethlehem Steel Corp., which built the Argentine government's refinery, is interested in the proposal.

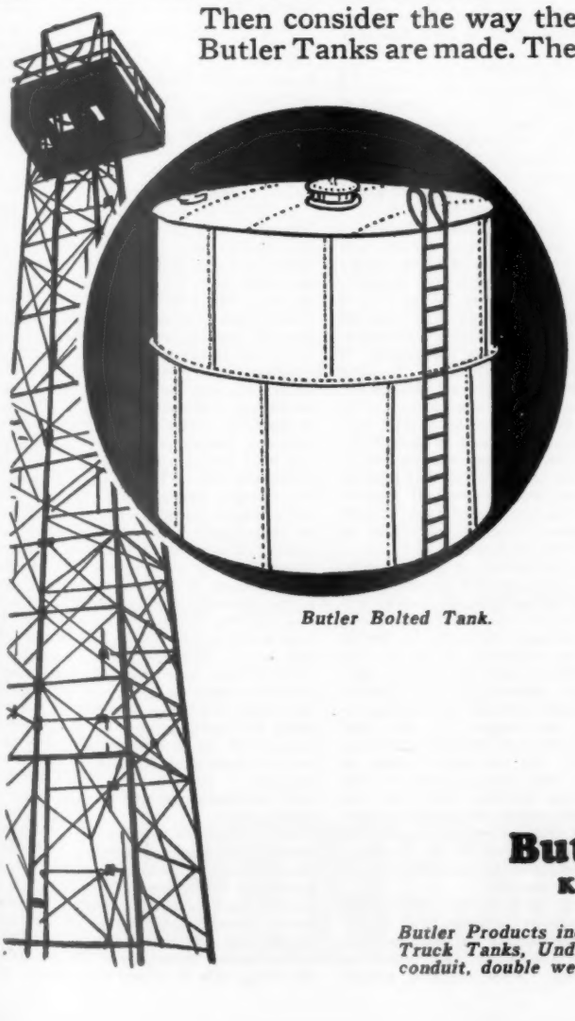
"Oil going on Ground"

THE telegram from which the above is quoted meant that dollars were being wasted. Storage was urgently needed. Speed was imperative!

The wire read, "INCREASE TELEPHONE ORDER 10,000-BARREL BUTLER BOLTED TANKS TWO MORE. PLEASE RUSH ALL POSSIBLE. OIL GOING ON GROUND." This wire was sent to us when the McCamey field in West Texas was springing into big life.

It is natural that such service should be requested of Butler. Butler service is dependable. Butler distributors are reliable.

Then consider the way the Butler Tanks are made. The placement of *all* holes are dependable. They are *all* punched in massive machines. (An interesting description of how this is done is absorbingly described in the Butler "Oil Field Tanks" Book.)



Butler Bolted Tank.

All sheets are large. Fewer sheets are required. Less handling is necessary. Fewer seams result. There are fewer chances for leaks.

All sheets are made of blue annealed copper steel or 3/16" tank plates for added strength and rigidity where needed.

The "Oil Field Tanks" Book will interest every producer. Copy on request. Send for it.

Protects Your Men

The Butler Clean-out Opening is large—measuring 2'x4'. It is not a back breaker. It is convenient for an entire cleaning out of the tank. Because of the size of this opening the work can be done easily, quickly and more safely.

All bolts are removable from the outside!

Any kind of welded tank made to your specifications.

Bolted tanks up to 25,000-barrel capacity.

These reliable dealers erect Butler Bolted Tanks and are ready to serve you speedily:

M & V Tank Co. at Wichita Falls, Olney, Nocona, Cross Plains, Albany, Cisco, Isom and Brownwood, Texas.

Drane-Humphrey Co. at San Angelo, Big Lake, Pyote and McCamey, Texas, and Roswell, New Mexico.

Drane Tank Co. at Tulsa, Holdenville, Seminole, Hallett and Shawnee, Oklahoma; Eldorado and Madison, Kansas.

M. A. Trimmer at Blackwell, Oklahoma, and Oxford, Kansas.

Keyes-Butler Tank Co. at Casper and Cody, Wyoming.

Thomas Moran at Oil City, Shreveport and Georgetown, Louisiana.

TRADE STEEL BUTLER PRODUCTS MADE

Butler Manufacturing Company

Kansas City, Mo. **Minneapolis, Minn.**

New York Office: Room 701, 44 Whitehall St.

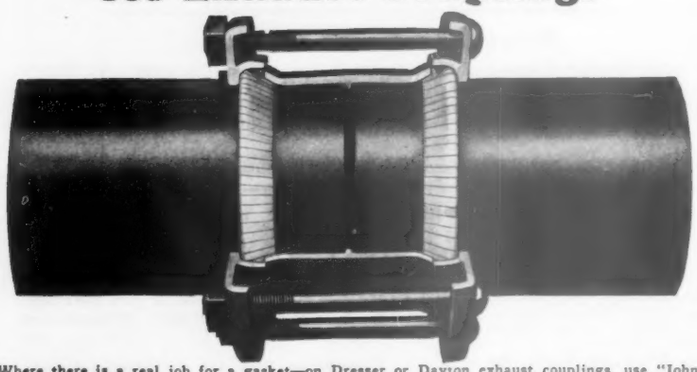
Butler Products include: Ready-Made Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps, Truck Tanks, Underground Tanks, Storage Tanks, Bolted Tanks, Etc., pipe that can be used as conduit, double well casing or in other ways.

FENWICK-REDDAWAY MFG CO. NEWARK, NEW JERSEY
IWANA HAIR BELT
"IWANA"
HAIR BELT

Imperviousness to Moisture enables "IWANA" to work under any atmospheric condition, regardless whether same be wet or dry, or very hot or very cold temperatures.

FENWICK-REDDAWAY MANUFACTURING CO.
NEWARK, N. J.
Tulsa Representative: A. F. Campbell, P. O. Box 171

"John Crane"
Armored Gaskets
for Exhaust Couplings



Where there is a real job for a gasket—on Dresser or Dayton exhaust couplings, use "John Crane" Armored Gaskets. They do not vulcanize to the pipe. Will stand any temperature developed. Are flexible, compressible and have ample resilience to compensate all temperature variations. The armor prevents disintegration caused by acid and heat and permits them to be used over and over if desired.
Inquiry invited. Sample for examination is sent gladly.
Learn to judge packing equipment by the material from which it is made.

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Whealton & Townsend, TULSA
Slough, Bucks, England

MODERNIZATION OF CYLINDRICAL STILLS

(Continued from Page 164)

from this combustion chamber to and through the firing tubes. No difficulty is had in the maintenance of the heating tubes.

Attempts at direct firing into the tubes of B.K. stills have been unsuccessful because of coking and burning of the oil on heating surfaces. It is logical to conclude that oil circulation can be applied even more advantageously to the heating tubes of this type of still, than is the case with oil circulation outside fired shell stills in which all sediment in the oil tends to settle to the bottom requiring unusually vigorous circulation of oil to prevent deposition and coking of the bottom.

Suggested Application

The following proposed plan of modification appears to meet all requirements of reduction in cost and promises even better efficiency. Assuming that a still 10 feet in diameter and 30 feet long were to be converted, the application of a single fire tube of about 3½ feet in diameter would give ample heating surface and furnace volume to satisfy all necessities of combustion and heat absorption, by the oil. This tube may be offset from the center of the still to allow for the installation of a submerged, vertical still pump. The oil distributing manifolding can then be wrapped around the firing tube and the nozzles directed so as to impinge jets of oil against it. Tests show that the sheet flow of oil circulation covers this type of surface just as perfectly as it does that of the bottom of an outside-fired still. A mechanical atomizing burner can then be directly applied to the end of the fire tube. In order to promote convection of transfer from incandescent gases to the heating surface, it is also proposed to spin the gases of combustion at high R.P.M. giving a velocity over the heating surface of over 100 feet per second, for the entire length of the heating tube. This is now being successfully done in some fire tube boilers.

The removal of spinning gases from the stack end of the heating tube demands a special solution. This is accomplished by unwinding them through a volute. Spinning energy can thus be economically converted into pressure to drive the issuing gases through a circulatory heating system, such as an air pre-heater on convection bank or through both. Such a combination assures high overall thermal efficiency of the unit. It is obvious that this plan would be good from many points of view. All expensive masonry is eliminated. There can be no loss of combustion gases at high temperatures from such a tubular combustion chamber, neither can there be any infiltration of cold air to decrease efficiency. In view of high transfer rates recently obtained in fire tube boilers, the application of a similar fire tube surface in a shell still would very probably result in greatly increased transfer rates per square foot of heating surface compared to that already obtained in an outside-fired oil circulation still. This compressed type of high capacity heating unit is adaptable to many diversified applications.

Progress in petroleum refining has recently developed a decided movement toward vaporizing greatly increased percentages of crude charged to distilling units. The economic necessity for better realizations on refining operations has had a controlling influence on this tendency. High percentage vaporization often necessitates dividing the heating operation into two stages. In the first stage, gas oil and more volatile distillates are separated. In the second stage of distillation at high temperatures, for the recovery of wax distillate and more viscous lubricating stocks, no particular difficulties are encountered in vaporizing fairly high percentages of the charge until temperatures in the neighborhood of 600 degrees are reached.

In distilling most crudes undesirable cracking occurs at temperatures of between 600 degrees and 750 degrees Fahrenheit, especially when the period of heating is long. Such cracking always greatly reduces yield of lubricating distillates and it may seriously interfere with recovery of wax from distillates of paraffin base. To eliminate or reduce cracking several methods have been employed. A large quantity of steam introduced in the evaporating chamber of a distilling unit lowers temperatures required for vaporizing a given percentage of distillate but large quantities of steam are expensive. Distillation under high vacuum with steam injection lowers further the necessary temperature of oil in the heater. Distillation of heavy crude under high vacuum without steam has not proved to be altogether satisfactory. Refining by all of the methods noted has been accompanied by an undesirable degree of cracking when the heating is done in practically any type of oil heater of conventional design where relatively low flow velocities are maintained and the heating time is long. This indicates a need of improving the means of heating hydrocarbon liquids when decomposition is to be avoided.

Data from the cracking art shows clearly that chemical decomposition of hydrocarbons, by heat, is greatly influenced by the period of time during which oils are held at high temperatures. In most heaters, now available, the liquid volume capacity divided by charging flow rate through heater gives a time factor that is many times too large to avoid a "soaking" effect and cracking where it is not desired. Unquestionably, there is an urgent need of equipment in which oil may be heated to desired thermal temperatures within an extremely short period of time. The ideal system would be one in which the temperature of distillation could be reached in a period of a few seconds, vaporization accomplished in a zone of lowest possible hydrocarbon pressures, to keep down terminal temperatures, and the distillates rapidly cooled after fractionation or separation.

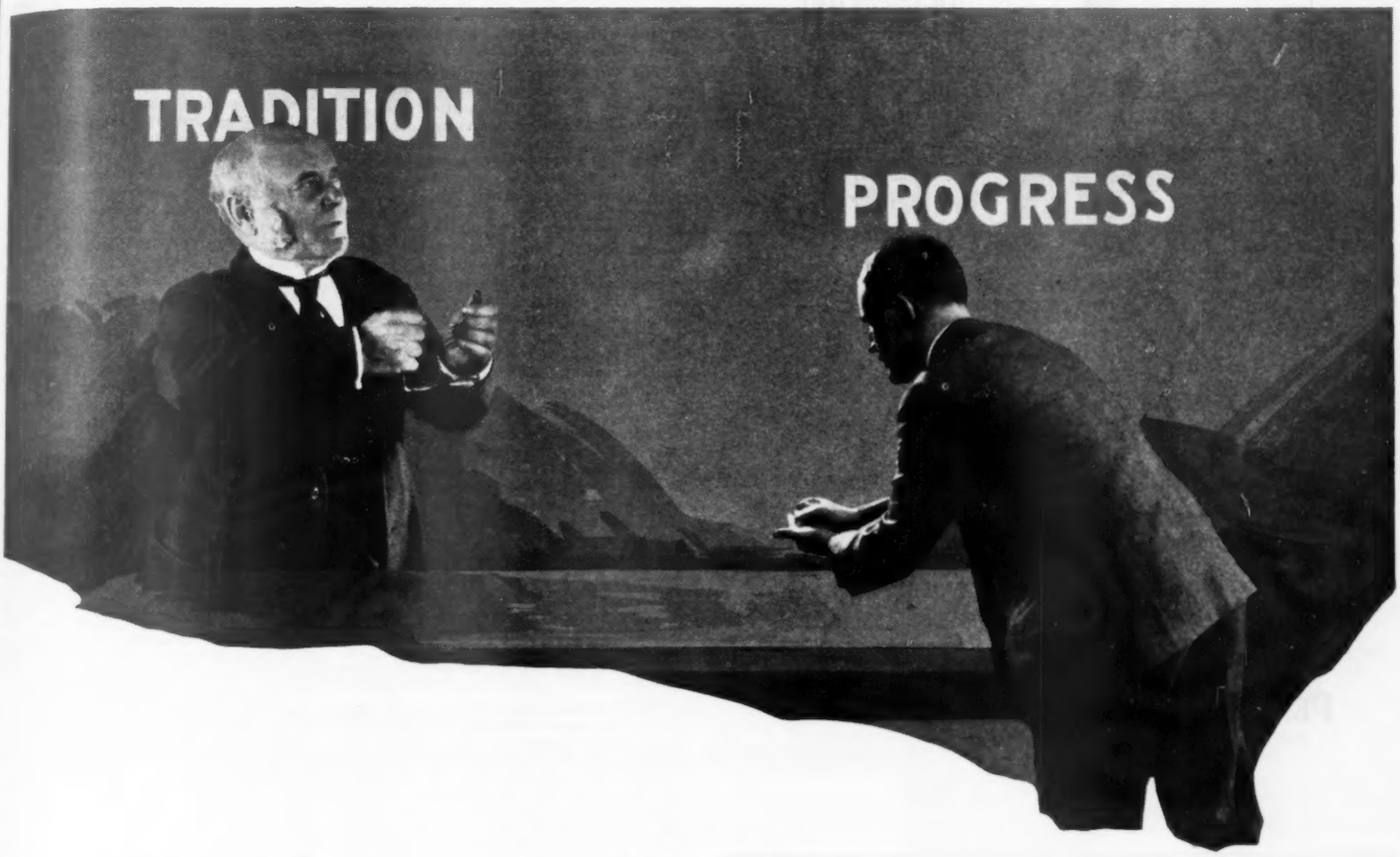
How can such specifications be met? In the first place, very rapid heating of oil can only be done with an absorbing surface to which practically all heat is transmitted by radiation at high temperatures. The oil in turn must absorb this transmitted heat as fast as delivered with lowest oil film temperature. The time factor must be small and the total liquid volume of the heater must also be small, which is simply another way of stating that the specific heat transfer rate must be unusually high.

Direct Heater Designs

Of all direct heater designs, that might be satisfactory for this purpose, there are principally two that stand out, in the opinion of the writer, as heaters which seemingly have a good chance of ultimate success. The first conception is a heater constructed with tubes of small diameter, spirally wound, and the second conception is an inside fired heater with oil circulation in the annular space between the firing tube and the collector tube. In the construction of the first with small tubes, it would be preferable to wind the spiral elements around a refractory core and fire it at the top in the annular space between the coil of tubes and the inside of the circular furnace enclosing it. This arrangement would permit the utilization of centrifugal force, developed by high velocity flow of oil in the spiral tubes, to throw a liquid oil covering over the surface exposed to highest absorption rates in the furnace. Any vapor formed could rise on the inner part-diameter of the tube which would not be exposed to radiant heat. The chief disadvantages of such a small tube heater are high pressures required to drive the oil through the coils, difficulty or rather impossibility of cleaning and the low heating capacity of the back half of the tubes that are not exposed to fire. It would be imperative to operate at a fixed, full rate with optimum velocity of oil flow to avoid coking.

Oil circulation applied to this special heating problem apparently would meet requirements of operation and presents no particular difficulties of construction or maintenance. An oil circulation type of heater would comprise a firing tube against the outer surface of which the oil to be heated is impinged. Surrounding the firing tube is placed a concentric col-

Lad speaks of "dreams come true"



"Here, Lad—

isn't it strange how many of those wild dreams we had years ago are today realized facts . . . around the world in 80 days . . . 20,000 leagues under the sea?"

"Yes, Pop—

and you raved once when our competitor wrote in his catalog that his cast sleeves for the oil industry were designed in such a way that they were 'STRONG AS STEEL.'

You said that it was misleading—that cast iron was never as strong as steel—never would be, etc., etc.

And you've stuck to cast valves while this same competitor has stuck to his steel story until he has now produced a sleeve of steel made into a homogeneous whole by 'Stable-Arc' welding. (See pages 4, 20 and 22, in text book.)

So now it has come true.

It *is* as strong as steel because it IS steel.

There's nothing romantic any more in the phrase STRONG AS STEEL—it's just practical.

It's exactly the same as when we used to talk about making flying visits—and now Lindy literally makes them—for good will."

The Lincoln Electric Co., Dept. 26-3, Cleveland, Ohio

"Stable-Arc" LINCOLN WELDER

W-36

PENBERTHY PRODUCTS
ESPECIALLY ADAPTED TO THE
OIL FIELD BOILER
The Penberthy High Pressure Automatic Injector is built especially for the operating conditions encountered in the oil fields. It is an efficient and thoroughly dependable means of boiler feeding, and it requires no special attention or delicate handling.
Stocked by your nearest supply house.
PENBERTHY INJECTOR COMPANY
ESTABLISHED IN 1886
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Built of specially prepared high quality oil-resisting rubber. The stitched driller belt demonstrates its economy month after month by uninterrupted service.

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This hose, especially made for oil well use, is constructed of highest grade materials, insuring the greatest flexibility and economy in drilling.

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lector tube enclosing a thin annular space of small total volume for the flow of oil. Manifolding for the uniform distribution of oil, from the discharge of the circulating pump to the nozzles, is attached to the outer shell, as is also the manifold for receiving the heated oil as it is forced from the annular space through slots and passes directly to the vaporizer.

The circulating pump, being incorporated in the vaporizer, receives the separated oil, discharging a portion from the system and sending the remainder back through the heater with the fresh feed. Energy put into the circulating pump is usefully expended in imparting desired high velocity to the sheet flow of oil over the heating surface. All of this surface "sees" the fire and transfers heat at a uniform rate. Interconnection of power for the fuel set and circulating pump would make burning of the sheet improbable. The firing tube could be easily withdrawn for inspection. It is evident that charging rate to this heater would not influence velocity of oil over the heating surface though the time factor would be changed.

Combustion

Before a rational design of any type of heater can be undertaken, it is imperative to first study the source of heat to be used and the mechanism of combustion. The subject of combustion is entirely too extensive to permit much discussion in this paper. However, the writer believes that it is worth while to touch on a few of the frequently neglected high spots.

The petroleum industry as a whole uses a tremendous quantity of fuel. The largest single item of expense in distilling oil is that for fuel, yet its proper utilization has received relatively little attention.

In all considerations of the economical use of fuel too much emphasis cannot be given to the importance of carefully analyzing all the factors that influence combustion. Combustion in any oil heater should be just as complete as that which occurs in the cylinder of an internal combustion engine, fed with a correctly proportioned mixture of air and fuel.

An oil burner should provide means for easy adjustment of air-fuel ratio, should comprise a circulatory fuel oil feed for control of fineness of fuel atomization, and it should be capable of intimately mixing the air and atomized fuel. In addition, it should also be equipped with a tangential air-inlet diffuser giving control of the R.P.M. of the components of combustion passing through the firing venturi. Such a burner will feed an explosive mixture into the combustion chamber. There is no danger whatsoever in its employment, providing a torch for lighting is always introduced before injecting the mixture. The requirements for burners using combined oil and gas, gas alone, or powdered coal are identical. Only such carbureting burners will permit the realization of maximum fuel economy.

The flame burst, using gas as fuel, is much less luminous than that from oil or powdered coal. It is therefore more difficult to absorb radiant heat from incandescent gases of combustion when using gas as fuel, than it is from the incandescent carbon particles of a flame burst when using oil or powdered coal. The chemical constitution of the gases of combustion also effect radiant absorption. If high radiant absorption is to be obtained with gas fuel, it is advisable to burn at least a small quantity of fuel oil with it. All flame burst temperatures are greatly elevated by increase in temperature of the air fed to combustion. For this reason, it is always desirable to heat the air to as high a temperature as is practical in order to elevate flame burst temperatures to a maximum. As high values of CO_2 are approached in combustion any lack of homogeneity of the air-fuel mixture becomes more apparent and should be corrected. In a well-conceived combustion system, it is not difficult to maintain a CO_2 value of between 13 and 14 per cent.

Absorbing Surface

The absorbing surface, on the fired side, is an item of great importance in all heating systems. Though the temperature of this surface influences radiant heat transfer but little, its temperature does greatly influence transfer by convection. As a consequence, it is of advantage to lower absorbing sheet temperatures as much as possible if high convection transfer is to be had. Also, for the reason that velocity has a decided influence on convection transfer, the gases of combustion should be made to travel at high velocity over the absorbing surface. The requisite velocity can easily be imparted by spinning the components of combustion. Another distinct advantage of rotating the gases of combustion in circular chambers over periferal absorbing surface consists of utilizing centrifugal force to flow the hottest gases of lowest special weight to the axis of rotation, thus maintaining a core of highest temperature to support combustion. Spinning combustion within firing tubes gives rise to practically no heat insulation by deposition of finely divided solids. In the light of present knowledge, it is quite safe to assert that we are still far from having reached any insurmountable limitation in rates of heat absorption from combustion gases by clean metal sheets, or the transmission of heat through them.

Most of the serious difficulty of heat transmission seems to be on the side where the liquid fails to absorb the heat transmitted. Examining the principal causes of failure of heat absorption of liquids we find nothing that cannot be corrected. The entire transfer surface should be swept by a continuous sheet of liquid moving at high velocity in most complete and intimate contact with it. This flood of liquid must be of sufficient quantity to furnish an adequate medium for absorbing all the heat transmitted.

Immediately after the contact with the heating sheet the liquid should be allowed to freely evaporate. Flow at high velocity assures perfect cleanliness on the liquid side of the sheet, guarantees lowest film temperature, and prevents the accumulation of silt, carbon or salt films having high heat insulating properties. The heat absorbing capacity of vapors or of these vapors mixed with atomized liquid is many times lower than that of the liquid. From this fact it follows that a heating surface can only be sufficiently protected from failure by the sweep of liquid when this surface, on the fire side, is directly exposed to absorption of radiant heat at high temperature levels and at high specific rates.

The system of forced circulation fulfills all requirements of highest transfer rate. It makes every ton of metal in the heater do more work than it has done before. The degree of protection from failure provided for any heating surface is most definitely measurable in terms of the amount of energy efficiently expended in moving the liquid over that surface to conduct the heat away.

APPROVE OIL PERMIT EXTENSION

WASHINGTON, D. C., Mar. 10.—The Senate has passed the bill already approved by the House authorizing Secretary of the Interior to grant 2-year extensions for oil and gas-prospecting permits.

The bill gives the secretary authority to make further extensions if necessary. The measure is intended to cover the situation where a permittee has been unable, with the exercise of reasonable diligence, to begin drilling operations or to drill to the depth and within the time required.

G. E. SUGGESTION AWARDS

The General Electric Co. awarded $51,567 to 4,913 of its employes during 1927 for their suggestions tending to improve working conditions or increase the efficiency of the company's operations. During the year 15,059 suggestions were offered, an increase of 500 over the previous year, and more than 32 per cent were accepted.

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Thousands of successful shots show how the Zero Hour Electric Bomb protects Oil Well Investments

More than 35,000 miles total flight without overhauling the motor is striking evidence of the dependability of the Spirit of St. Louis. The nearly 5,000 shots that have been put off successfully with the Zero Hour Electric Bomb are plain proof of its *safety* and *certainty* of operation.

Careful study of the design and construction of the Zero Hour Electric Bomb explains its dependability by showing that this bomb is scientifically engineered—that it is as nearly "fool-proof" as is possible in any device involving the human element.

The Zero Hour Electric Bomb will NOT explode before the time for which it is set to explode. It is SAFE TO HANDLE, and safe to run into costly wells. It is economical insurance against damage to these wells during shooting.

The Zero Hour Electric Bomb WILL function under any conditions of heat, pressure or magnetic influence, or when buried (with the shot) under cavings. It eliminates the uncertainty from oil well shooting.

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SPECIAL 22-HOUR TYPE has a setting range of 12 to 22 hours. STANDARD TYPE has a setting range of 1 to 11 hours. Both types furnished with either 3¼ O.D. cast iron shell, or with 2¼" O.D. seamless tubing steel shell with cast iron cap. The Zero Electric Bomb can be secured through all principal torpedo companies.

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NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Carson County

Skelly Oil Co.'s No. 8 H. Schafer, 990 feet north and west of the SE cor. of the SW of Section 88, Block 4, I.&G.N. Survey.

Gray County

Delmar Oil Co.'s No. 1 F. Foster, 330 feet south and east of the NW cor. of SW of Section 55, Block B-2, H.&G.N. Survey. Empire Gas & Fuel Co.'s No. 1 C. L. Holmes, C of NE of Section 179, Block 3, I.&G.N. Survey. Osborn and others' No. 1 E. E. Barrett, 330 feet north and west of the SE cor. of the NE of Section 111, Block 3, I.&G.N. Survey.

Hutchinson County

Alamoso Oil Co.'s No. 2 J. M. Stanford, 338 feet north and 883 feet west of the SE cor. of the south 46 acres of the north 320 acres of Section 83, Block 46, H.&T.C. Survey.

Potter County

Amarillo Oil Co.'s No. Lee Bevins-B, C of NW of Section 27, Block O-18, Denison & Pacific R. R. Survey. El Rio Oil Co.'s No. 1 Canadian River bed, 528 feet north and 670 feet west of the NE cor. of Section 106, Block 46, H.&T.C. Survey and located in the bed of the Canadian River.

Wheeler County

Clark and others' No. 1 J. D. Purcell, C of NW of SW of Section 51, Block 17, H.&G.N. Survey.

NORTH CENTRAL AND WEST TEXAS

Archer County

Fain-McGaha and Humble Oil & Refining Co.'s No. 1 L. F. Wilson-C, 74 feet south and 150 feet west of the NE cor. of the south 33 acres of Lot 27, Wilson's Geraldine Subdivision. F. H. Gohlke and others' No. 1 Jones & Warden, 150 feet north and east of the SW cor. of Lot 236, Geraldine Subdivision. H. Hines and L. E. Trout's No. 1 W. L. Andrews, 150 feet south and 660 feet west of the NE cor. of the SE of Section 136, Robert Carson Survey. Pois & Johnson's No. 1 Annie P. Jackson, 150 feet north and west of the SE cor. of the north half of Lot 131, W. B. Aldridge Survey, A-2. United Prod Co.'s No. 4 J. J. Perkins and others, 150 feet south and east of the NW cor. of the NE of Section 22, League 3, Denton County school lands, A-117. Bridwell Oil Co.'s No. 2 L. T. Burns, 450 feet south and 150 feet west of the NE cor. of the east 60 acres of the west 80 acres of Section 27, Club Ranch Subdivision. Maer & Staniforth's No. 1 Charles H. Thuman, 150 feet north and east of the SW cor. of the north 42.5 acres of the west 80 acres of Section 67, Club Ranch Subdivision. Marland Oil Company and Consolidated Oil Co.'s No. 6 H. L. and J. F. Ward, 509 feet north and 794.5 feet east of the SW cor. of Section 1,379, T.E.&L. Survey. F. P. Rose and others' No. 1 L. H. Farmer, 150 feet south and west of the NE cor. of Lot 9, L. H. Farmer Subdivision, W. C. Winters Survey, A-663. The Texas Company and others' No. 1 C. E. Graham, 2,603 feet south and 900 feet east of the NW cor. of the W. B. Sweeney Survey, A-397.

Brown County

Cen-Tex Refining Co.'s No. 4 H. L. Allcorn, 2,952 feet south and 550 feet west of the NE cor. of H. L. Allcorn 110-acre tract out of the Roland Honeycutt Survey No. 623. Charter Oil Co.'s No. 4 Hamp Byler, 275 feet north and 150 feet west of the SE cor. of its 40-acre lease out of T.&N.O. Survey No. 43. Clark-Buffalo Oil Co.'s No. 3 Brown County, 2,560 feet south and 2,125 feet east of the NW cor. of James Kenny Survey No. 624. Cranfill & Reynolds' No. 3 J. W. Newton, 4,375 feet north and 3,350 feet west of the SE cor. of Roland Honeycutt Survey No. 623, being 780 feet north and 1,540 feet west of the SE cor. of their lease. Jay Hawk Oil Co.'s No. 2 B. S. Boysen, 150 feet north and 1,107 feet east of the SW cor. of the north 40 acres of B. S. Boysen 160-acre tract out of H. Presler Survey, A-2,041. F. Kelsey and others' No. 1 L. A. George, 150 feet north and west of the SE cor. of the south 17 acres of the east 37.5 acres of L. A. George 120-acre tract out of Section 42, H.&T.B. Survey. Lamb & Shaw's No. 3 J. M. Perry, 2,050 feet south and 2,520 feet east of the NW cor. of James Kenny Survey No. 624. Pandem Oil Corp.'s No. 2 A. L. Curry-A, 783 feet south and 150 feet east of the NW cor. of the east 81 acres of A. L. Curry 160-acre tract out of E. L. Betts Survey, A-70. Rex-Pyramid Oil Co.'s No. 16 J. H. Fry, 950 feet north and 1,000 feet east of the SW cor. of its lease out of George Stubblefield Survey No. 622. E. F. Aldrick's No. 1 L. J. Stanley, 150 feet east of the Ft.W.&R.G. right of way and 150 feet north of the south line of L. J. Stanley 320-acre tract out of the Hrs. William A. Smith Survey No. 139, A-839. Lamb & Shaw's No. 3 J. A. Gwathney, 150 feet south and 535 feet west of the NE cor. of the southwest 40 acres of David Harris Survey, A-529. Wilson and others' No. 1 L. A. Spain, 150 feet north and west of the SE cor. of the west half of the NE of the NE of Section 10, H.T.&B. Survey.

Cooke County

McElreath & Suggett's No. 1 J. C. Whaley, 3,340 feet south and 1,390 feet west of the most northerly NE cor. of S.A.&M.G. Survey No. 3, A-999.

Coleman County

Anzac Oil Co. and others' No. 1 M. B. Alexander, 750 feet south and 200 feet east of the NW cor. of the M. B. Alexander 188.2-acre tract out of A. Quigley Survey No. 739. Broderick & Calvert's No. 1 N. B. Buck, 200 feet south and 150 feet east of the NW cor. of N. B. Buck 100-acre tract out of R. Cochran Survey No. 269. Rex-Tex & Py-Tex Oil Co.'s No. 1 J. M. Byrd, 150 feet north and east of the SW cor. of J. M. Byrd 150-acre tract out of Samuel Sprague Survey No. 664. L. Smith and others' No. 1 T. B. Hill, 150 feet south and west of the NE cor. of T. B. Hill 180-acre tract out of Samuel Sprague Survey No. 664. A. A. Cameron and others' No. 1 L. L. Baker, 150 feet south and east of the NW cor. of L. L. Baker 320-acre tract out of Mary Ann Fisk Survey No. 630. Dozier and others' No. 1 W. F. Guthrie, 150 feet south and east of the NW cor. of W. F. Guthrie 414-acre tract out of A. S. Lipscomb Survey No. 77. J. K. Hughes' No. 1 A. L. Nowlin, C of north half of Lot 17, Jacob Pevehouse Survey No. 755. Taylor-Link Oil Co.'s No. 1 J. Z. Miller, 1,200 feet south and

Domestic Exports of Petroleum and Refined Products

	Month of January		Six months ended December	
Petroleum:	1927	1928	1926	1927
Crude ..... Bbls.	1,203,543	1,225,530	7,834,016	8,304,680
Crude ..... $	2,289,552	1,697,870	14,698,201	13,402,774
Total refined petroleum ..... Bbls.	9,243,639	11,010,906	54,840,291	58,029,179
Total refined petroleum ..... $	41,117,173	37,034,052	248,669,948	198,960,663
Gasoline, naphtha, other light products. Bbls.	3,489,532	3,712,025	20,664,390	21,257,021
Gasoline, naphtha, other light products. $	20,805,962	15,236,501	127,138,111	91,364,783
Oils:				
Illuminating ..... Bbls.	1,591,841	2,344,643	11,885,122	9,915,431
Illuminating ..... $	7,804,079	9,743,726	55,003,237	37,689,265
Gas and fuel ..... Bbls.	3,301,679	4,018,995	17,767,223	21,851,461
Gas and fuel ..... $	4,607,763	4,270,877	23,783,575	23,925,812
Lubricating ..... Bbls.	848,349	924,065	4,454,329	4,948,401
Lubricating ..... $	7,718,480	7,641,883	41,732,781	45,131,888
Other refined petroleum ..... Bbls.	12,238	10,988	68,707	56,865
Other refined petroleum ..... $	180,889	141,065	1,012,244	846,915
Paraffin wax ..... Lbs.	29,284,108	39,712,147	169,981,112	184,059,860
Paraffin wax ..... $	1,620,851	1,558,935	9,650,879	7,370,006

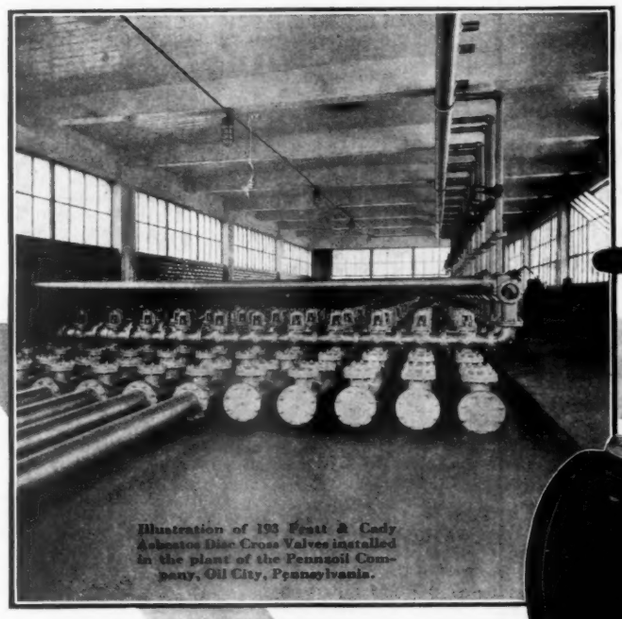

Illustration of 193 Pratt & Cady Asbestos Disc Cross Valves installed in the plant of the Pennzoil Company, Oil City, Pennsylvania.

Pratt & Cady Iron Body Globe and Angle Valves

For tail house and other manifolds cross valves are economical of space and save many fittings and joints. The Pratt & Cady Asbestos Disc Cross Valve offers another economy in its renewable disc.

The asbestos disc ring is soft enough for chips, scale, etc., to embed in it without immediately affecting the tightness of the valve. When it is renewed a complete new disc, holder and asbestos ring in one unit is slipped on by hand. The only tool needed is a wrench for the bonnet joint.

Bronze Union Bonnet Globe Valves

Pratt & Cady Asbestos Disc Bronze Globe Valves are renewable in the same easy way as the Iron Valves. It is a hand job except for the wrench to open the bonnet joint. The asbestos rings are rolled into the holder—no nuts or washers to drop off in the line.

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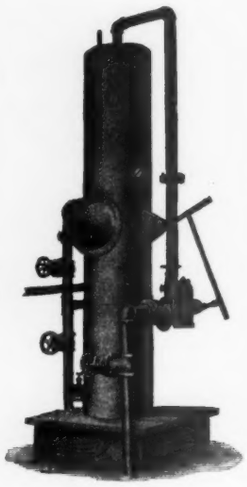
READING *for steel*
PRATT & CADY *for iron and bronze*
specializing for quality valves and fittings
"There can be no compromise with safety"

SIMPLICITY



in construction and operation is important in an oil and gas separator. There are no complicated parts to get out of order in the Trumble and the separator is ready to start operating as soon as set up and connected. There are no adjustments that require the services of an expert mechanic.

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THE features of design that make Pyle-National Type M-2-S rig lighting units different from the ordinary turbo-generators are definitely proven. Two years operation of hundreds of Type M-2-S units has shown that every detail of construction is sound, and reliable under any operating conditions.

For reliable, economical electric power of ample capacity for any needs of rig lighting, get the Type M-2-S unit.

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Export Department:
International Railway Supply Co.
30 Church Street,
New York City

O&GJ 3-15-Gray

600 feet east of the NW cor. of Section 42, Coleman County School Land No. 94.

Eastland County

Root and others' No. 4 J. T. Watson, 350 feet north and 1,500 feet east of the SW cor. of the south half of Section 37, Block 4, H.&T.C. Survey.

Fisher County

Sinclair Oil & Gas Co.'s No. 1 F. Steele, 330 feet south and 940 feet west of the NE cor. of Section 72, Block 1, H.&T.C. Survey.

Glasscock County

Josey & Finchbaugh's No. 1 S. R. Cox, 1,320 feet west of the NE cor. and located on the north line of Section 29, Block 33, Township 4s, T.P.R.R. Survey.

Hardeman County

The Texas Company's No. 1 F. D. Clisbee, 332 feet south and 1,092 feet west of the NW cor. of Section 15, E.L.&R.R. Survey, A-570, and located in Martha Reeves Survey, A-697.

Howard County

Coyle-Concord Oil Co.'s No. 5 Dora Roberts, 1,470 feet south and 1,710 feet west of the NE cor. of Section 156, Block 29, W.&N.W.R.R. Survey. F. E. H. Oil Co.'s No. 3 Dora Roberts-A, 1,170 feet south and 1,210 feet west of the NE cor. of Section 156, Block 29, W.&N.W.R.R. Survey. Same company's No. 4 Dora Roberts-A, 1,170 feet south and 1,710 feet west of the NE cor. of Section 156, Block 29, W.&N.W.R.R. Survey. Magnolia Petroleum Co.'s No. 7 Dora Roberts, 2,390 feet north and 2,440 feet east of the SW cor. of Section 136, Block 29, W.&N.W.R.R. Survey. Merrick & Lamb's No. 4 H. R. Clay, 1,070 feet north and 660 feet west of the SE cor. of Section 126, Block 29, W.&N.W.R.R. Survey.

Jack County

General Oil Co.'s No. 1 J. P. Simpson, 150 feet south and 1,000 feet east of the NW cor. of W. Loughridge Survey, A-356.

Mitchell County

The California Co.'s No. 8 C. M. Adams, Lease No. 2, 990 feet south and 1,650 feet east of the NW cor. of Section 11, Block 28, Township 1n, T.&P.R.R. Survey.

Montague County

Arco Oil Co.'s No. 4 S. F. Loy and others, 2,500 feet south and 750 feet west of the NE cor. of S. F. Loy and others' 210-acre tract out of William Donoho Survey, A-178, being 450 feet north and 150 feet west of the SE cor. of its 49.5-acre lease. R. I. Carter's No. 2 E. J. Bouldin, 450 feet north and 1,494.5 feet east of the SW cor. of C. Chacon Survey, A-140, being 450 feet north and 150 feet west of the SE cor. of his lease. Carter & Rycade Oil Corp.'s No. 7 R. W. Cunningham and others, 450 feet south and 500 feet east of the NW cor. of their lease and located in L. B. Norton Survey, A-574. Pure Oil Co.'s No. 7 J. W. Maddox-A, 150 feet north and west of the SE cor. of its 33.6-acre "A" lease out of S. H. Arnold Survey, A-5.

Pecos County

Furman Oil Co.'s No. 1 T. W. McNear, Jr., 1,060 feet south of the Pecos River and 1,342 feet east of the west line of Section 46, Block 9, H.&G.N. Survey. Humble Oil & Refining Co.'s No. 7 M. A. Smith, 2,594 feet north and 330 feet east of the SW cor. of Section 36, Block 194, G.C.&S.F. Survey. Mid-Kansas Oil & Gas Co.'s No. 1 I. G. Yates-G, 1,411 feet north and 250 feet west of the SW cor. of Section 63, Block 1, I.&G.N. Survey and located in Section 34½, Block 194, G.C.&S.F. Survey. Phillips Petroleum Co.'s No. 1 El Paso Cattle Loan Co., 330 feet north and west of the SE cor. of Section 8, Block 125, T.&St.L.R.R. Survey. Rowan & Tong's No. 1 Scharff & Blackman, 990 feet south and 1,980 feet east of the NW cor. of the south 320 acres of Section 4, Block 9, H.&G.N. Survey. Roxana Petroleum Corp. and Kirby Petroleum Co.'s No. 1 University Land, 2,180 feet south and 1,547 feet west of the NE cor. of Section 23, Block 26, University Land.

Reagan County

Skelly Oil Co.'s No. 2 University Land, 1,653 feet north and 1,685 feet west of the SE cor. of Section 35, Block 8, University Land.

Shackelford County

Amerada Petroleum Corp.'s No. 1 J. M. Alexand... north and ... of the SE cor. o... Block 14, T.&P.R.R. Survey. J. ... Inc., No. 2 W. Y. and R. A. Davis, ... north and 150 feet west of the S... of the west half of the NE of Section 12, Block 12, T.&P.R.R. Survey. Dingee and others' No. 1 J. B. Mathews, 150 feet south and east of the NW cor. of the NE quarter of the SW quarter of Section 29, Block 10, E.T.R.R. Survey. Gilman & McMurray's No. 1 W. Y. and R. A. Davis, 830 feet north and 150 feet west of the SE cor. of the west half of the NW of Section 13, Block 12, T.&P. R.R. Survey. Same company's No. 1 W. D. Reynolds, 150 feet north and east of the SW cor. of the NE of Section 30, Block 11, T.&P.R.R. Survey. Same company's No. 2 W. D. Reynolds, 150 feet north and east of the SW cor. of the NE of Section 31, Block 11, T.&P.R.R. Survey. Hope Petroleum Co.'s No. 10 W. Y. and R. A. Davis, 750 feet north and 150 feet east of the SW cor. of the east half of the NE of Section 13, Block 12, T.&P.R.R. Survey. McLester Oil Co. and others' No. 1 R. J. Moberley, 200 feet north and east of the SW cor. of the NE of the NW of Section 1, Block 12, T.&P. R.R. Survey. C. Phillips & DeWitt's No. 1 W. Y. and R. A. Davis, 660 feet north and 2,640 feet east of the SW cor. of Section 20, Block 13, T.&P.R.R.

Stephens County

Thompson & Lawton's No. 1 G. A. Langford, 600 feet north and 300 feet east of the SW cor. of the east half of Section 52, Block 6, T.&P.R.R. Survey.

Terrel County

Keck-Pecos Trust Co.'s No. 1 Hamilton, C of Section 6, Block D-7, E.L.R.R. Survey.

Wichita County

Maxwell & Newton's No. 1 W. H. Chilson, 150 feet north and east of the SW cor. of the NE of Section 4, League 4, Denton County School Lands, A-417. Panhandle Refining Co.'s No. 2 F. P. Warren, 20 acres, 150 feet south and west of the NE cor. of the south 20 acres of the north 100 acres of the east half of F. P. Warren 320-acre tract out of William Kepler Survey, A-170. Same company's No. 3 F. P. Warren, 20 acres, 150 feet north and east of the SW cor. of the south 20 acres of the north 100 acres of the east half of F. P. Warren 320-acre tract out of the William Kepler Survey, A-170. E. J. Stump & Co.'s No. 1 W. H. Chilson, Section 5, 150 feet south and 500 feet east of the NW cor. of the NE of Section 5, League 4, Denton County School Lands, A-417. Ascot Co.'s No. 2 J. E. Roller-A, 850 feet north and 1,900 feet west of the SE cor. of the W. A. Grady Survey, A-351, being 150 feet south and 810 feet east of the NW cor. of its "A" lease. Same company's No. 1 J. E. Roller-C, 393 feet south and 569 feet west of the NE cor. of Lot No. 112, F. Peterswick Survey No. 1, A-244. Apple & Brandeberry's No. 1 G. B. Ancell, 1,850 feet north and 1,150 feet east of the SW cor. of Section 11, Block 7, H.&T.C. Survey, being 150 feet north and west of the SE cor. of their 57-acre lease. C. C. Bradford's No. 1 H. C. Obenhaus, 150 feet north and west of the SE cor. of Section 876, M.E.P.&P. Survey, A-230. F. E. Van Warmer's No. 9 J. A. Fisher, 150 feet south and 300 feet east of the NW cor. of his 40-acre lease out of Section 9, H.T.&B. Survey, A-135.

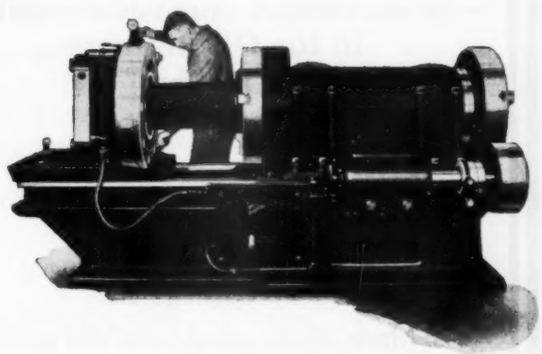
Wilbarger County

Fain-McGaha Oil Corp.'s No. 3 W. T. Waggoner-L, 750 feet south and 150 feet east of the NW cor. of the south 200 acres of the north 300 acres of the east 360 acres of Section 31, Block 4, H.&T.C. Survey. Phillips Petroleum Co.'s No. 8 W. T. Waggoner-JJ, 660 feet north and 1,154 feet east of the SW cor. of its "JJ" lease out of Section 46, Block 4, H.&T.C. Survey. The Texas Company's No. 2 W. T. Waggoner-F, 1,980 feet north and 660 feet west of the SE cor. of Section 5, Block 5, H.&T.C. Survey. Waggoner Refining Co.'s No. 3 W. T. Waggoner-F, 660 feet north and 200 feet east of the SW cor. of the SE of the SE of Section 25, Block 4, H.&T.C. Survey.

Winkler County

Atlantic Oil Producing Co.'s No. 5 Ida Hendricks-D, 2,310 feet south and 1,650 feet east of the NW cor. of Section 29, Block B-5, School Land. Danciger Oil &

Ask this question--



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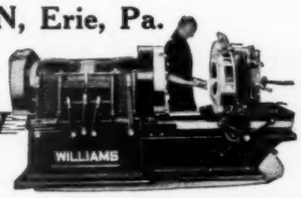

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Refining Co. and others' No. 1 John Sealy, 2,310 feet south and west of the NE cor. of Section 93, Block A, Gunter & Munson, Maddox Brothers and Anderson Survey. Humble Oil & Refining Co.'s No. 11 Grisham-Hunter, 2,310 feet south and 330 feet east of the NW cor. of Section 41, Block B-5, School Land. Landreth Production Corp. & Roxana Petroleum Corp.'s No. 5 Ida Hendricks-A, 2,310 feet north and 1,650 feet east o the SW cor. of Section 29, Block B-5, School Land. Southern Crude Oil Purchasing Co.'s No. 3 Ida Hendricks, T-88-H, 1,650 feet north and 330 feet east of the SW cor. of Section 28, Block B-5, School Land. Same company's No. 1 T. G. Hendricks, T-88-K, 330 feet south and west of the NE cor. of Section 41, Block 26, School Land. Texon Oil & Land Co.'s No. 4 Grisham-Hunter-A, 2,310 feet north and 1,650 feet west of the SE cor. of Section 41, Block B-5, School Land.

Young County

Beard-Millican & Ford's No. 1 C. W. Johnson, 150 feet north and east of the SW cor. of the west 40 acres of the south 200 acres of C. W. Johnson 1,026-acre tract out of E. W. Sargeant Survey, A-253. J. C. Cunningham's No. 1 B. Hawkins, 150 feet south and west of the NE cor. of Section 1914, T.E.&L. Survey. Robert Oil Corp. and others' No. 1 E. H. Burk, 1,250 feet south and 1,350 feet west of the NE cor. of the SE of Section 4, S.P.R.R. Survey, A-2,184.

Crrected Locations

Archer County: United Producing Co.'s No. 1 J. J. Perkins and others, 150 feet south and 750 feet east of the NW cor. of the NE of Section 22, League 3, Denton County School Land, A-117. Same company's No. 2 J. J. Perkins and others', 150 feet south and 450 feet east of the NW cor. of the NE of Section 22, League 3, Denton County School Land, A-117.

Brown County: M. L. Richard's No. 1 A. D. Hutton, 150 feet north and west of the SE cor. of the west 20 acres of the south 40 acres of the north 80 acres of J. A. Nobles Survey, A-1947.

MAY ACQUIRE LANDS ADJOINING RESERVES

WASHINGTON, D. C., Mar. 10.—Chairman Butler of the House naval affairs committee introduced a bill for the conservation and protection of the naval petroleum and oil shale reserves. Under the bill the Secretary of the Navy would be empowered, with the approval of the President, to acquire lands adjoining Naval Petrolem Reserves Nos. 1 and 2 for the purpose of protecting the reserves against drainage by privately owned wells.

The bill would also give the Secretary of the Navy authority to sell or exchange crude oil from the reserves for refined oils. The Secretary of the Navy would be authorized to negotiate reciprocal agreements with owners or lessees of lands adjoining naval reserves whereby either party may, instead of drilling offset wells, pay a compensatory royalty to cover the reasonable portion of the estimated drainage from such naval reserves or from the adjoining property, as the case may be.

The secretary would be further authorized to grant leases within Reserve No. 2 in exchange for lands held by private owners in Reserve No. 1 so as to consolidate the land retained by the Government in Reserve No. 1 and to protect such government lands from drainage.

Naval reserve crude and refined oil in storage under provisions of the bill would be drawn on only at times of emergency or when prices, in the judgment of the Secretary of the Navy, are unreasonable. In the latter instance the reserve might be used and replaced when prices declined.

BRITISH GAS IMPORTS EXCEPTIONALLY HEAVY

British petroleum imports at the beginning of 1928 showed some reduction from the average rate in 1927, amounting to 151,134,601 imperial gallons during the four weeks ended January 30. The decline is due chiefly to lower receipts of

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crude and fuel oil, other products being imported in good volume with the percentage of the total supplied by the United States rather above the average. The quantity of crude imported—36,754,349 gallons—was slightly below that in January of last year and considerably below the average for 1927. All these imports were Persian oil with the exception of 2,000,000 gallons from Curacao. Fuel oil imports were also below the average for 1927 and less than half those in January, 1927. The largest shipments were from Curacao.

Gasoline imports, however, with one exception during the summer, were the highest for any four-week period since the beginning of 1927 and exceptionally heavy for this season. The United States supplied 80 per cent of the total, and the remainder came from a rather wide variety of sources, including about 2,000,000 gallons from Russia. Kerosene was imported at about the average rate, with two-thirds of the total from the United States, and the Russian contribution reduced to 2,000,000 gallons.

Lubricating oil receipts were, by a small margin, the largest in any four-week period since January 1, 1927.

HUMBLE LINE LITIGATION

AUSTIN, Tex., Mar. 10.—Counsel for the State and for the Humble Pipe Line Co. have agreed to file a joint motion in the Supreme Court asking it to advance for a quick decision the State's coming application for a writ of error in the case in which the Attorney General is seeking a permanent injunction preventing the Humble company from laying a pipe line under the waters of Corpus Christi Bay and across Mustang Island.

LEGAL

SALE OF OIL AND GAS LEASES DEPARTMENT OF THE INTERIOR

Shreveport, Louisiana

Notice is hereby given that the following described lands in eight units in the known geologic structure of the Monroe Gas Field, Louisiana, are offered for lease under Section 17 of the act of February 25, 1920 (41 Stat., 437), at the customary sliding scale of 12½ to 33⅓ per cent of the quantity or value of the oil produced, of 12½ to 16⅔ per cent of the value of the gas produced and of 16⅔ per cent of the value of the natural-gas gasoline produced from each unit in accordance with the royalty schedule in the regular lease form, and the rental as required by Section 17 of the said act:

Unit No. 1.
T. 18 N., R. 4 E., Sec. 24, Lot 3, 9.24 acres.

Unit No. 2.
T. 19 N., R. 4 E., Sec. 8, NE¼ of NE¼, 40.00 acres.

Unit No. 3.
T. 19 N., R. 4 E., Sec. 30, Lots 1, 2, SE¼ NW¼, 106.70 acres.

Unit No. 4.
T. 19 N., R., 5 E., Sec. 10, SE¼ of SE¼, 39.82 acres.
T. 20 N., R. 5 E., Sec. 34, SE¼ of SE¼, 40.07 acres.

Unit No. 5.
T. 19 N., R. 5 E., Sec. 18, S½ of NW¼, Sec. 20, SW¼ of NW¼, Sec. 30, SW¼ of SE¼, 160.47 acres.

Unit No. 6.
T. 20 N., R. 3 E., Sec. 36, Lot 4, 15.80 acres.
T. 20 N., R. 4 E., Sec. 7, NW¼ of SW¼, 39.99 acres.

Unit No. 7.
T. 20 N., R. 4 E., Sec. 1, SE¼ of NW¼, Sec. 13, NW¼ of NE¼, 74.33 acres.

Unit No. 8.
T. 21 N., R. 5 E., Sec. 20, Lot 1; Sec. 29, NE¼ of SW¼; Sec. 33, Lots 2, 3, 4, 124.84 acres; all Louisiana Meridian, Louisiana, total, 651.26 acres.

The units are to be offered separately and are to be so considered as a basis for the payment of royalty, but any lessee may acquire two or more of the units in which the combined acreage does not exceed 640 acres.

The lands are offered for lease subject to the drilling of offset wells by the lessee first on lands adjacent to tracts on which commercial production of gas has been demonstrated, such drilling operations to be initiated within ninety days after the delivery of the executed lease, each succeeding well thereafter as required to be drilled by the terms of the lease shall be spudded in within ninety days of the completion of the drilling well, all drilling operations to be in conformity with the laws of the State of Louisiana and to be continuously and diligently prosecuted in accordance with the Federal oil and gas regulations.

Said leases will be offered for sale by public auction at the Federal Court Room, Shreveport, Louisiana, at 10 a. m., on February 27, 1928. The successful bidder must deposit on the date of sale, with the officer in charge of the sale certified check on a solvent bank, or cash, for one-fifth of the amount bid by him, and file the showing of qualifications to receive a lease required by Sec. 15 of said regulations.

Bidders are warned against violations of the provisions of Sec. 59, U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders.

The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior.

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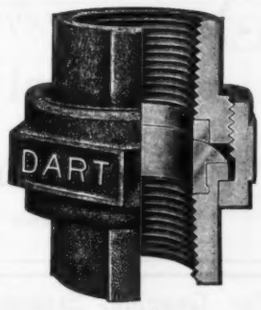

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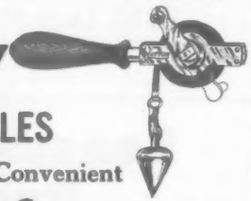

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DECISION ANNOUNCED ON KRUSHNIC SHALE

WASHINGTON, D. C., Mar. 10.—Secretary Work has promulgated decision in the Krushnic oil shale case, affecting lands in Utah, Wyoming and Colorado, denying motion for rehearing filed by the mineral claimant. The question involved is whether the applicant for a mineral location made on oil shale lands prior to the enactment of the mineral leasing act, and the repeal of the general mining laws as to shale lands, can obtain a patent under the general mining laws, where he failed for one or more years to perform the annual assessment work upon the claim, a requirement under the mining law.

It is contended by mineral applicants that the only penalty for failure to do this work would be relocation by some other citizen, and that this could not occur, in view of the repeal of the general mining laws affecting oil shale.

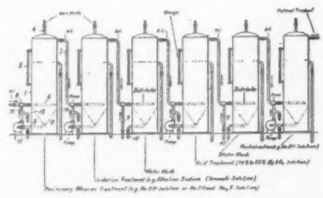
The Commissioner of the General Land Office and the First Assistant Secretary of the Interior, in decisions to which Secretary Work on rehearing adheres, held that in the event of failure to perform this annual assessment work the land reverted to the Government and was only subject to disposition under the general leasing law.

For nearly two years questions affecting these oil shale claimants have been before the department. After decisions by the General Land Office against the claimants, the Secretary of the Interior held a public hearing more than a year ago at which large numbers of shale claimants and their attorneys appeared and presented their views. Liberalization of the department's attitude on shale claims was then effected by decision of the secretary. The particular case here involved was twice heard orally by the secretary and at the last hearing full presentation was made orally and through numerous written and printed briefs. The secretary then directed that the entire matter be recommitted to the legal forces of the department and considered anew. Extended consideration was given and the law officers of the department unanimously joined in presenting to the secretary the decision just promulgated.

The question involved is purely one of law and is reviewable by the courts. Secretary of the Interior, in commenting upon the decision, stated that it expressed the unanimous view of his legal advisors in the General Land Office and finally by the staff of the Solicitors Office, and that under the circumstances he could not rule otherwise. The secretary invites the mineral applicant to institute in a proper court a legal proceeding, by mandamus or otherwise, so that the question of law involved may have final judicial determination.

Recent Patents

1,658,171. Refining Petroleum Oils. Paul McMichael, Flushing, N. Y., assignor to Hydrocarbon Refining Process Co., Inc., New York City, a corporation of New York. Filed November 17, 1924. Serial No. 750,252. 7 Claims. (Cl. 196—42.)



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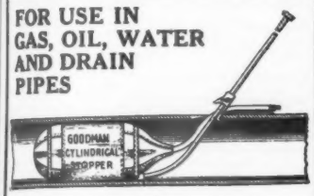

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HEYDRICK MAPPING COMPANY
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BIG CASING RECORD IN PENNSYLVANIA WELL

OIL CITY, Pa., Mar. 10.—The United Natural Gas Co. has established a new world's record for the use of 8¼-inch casing in its well at Lamont near Kane, according to an announcement made by experts of the company at Oil City. The well is now at 7,025 feet and drilling. It is caving some but not enough to interfere with drilling.

The company succeeded in landing a string of 8¼-inch casing in its deep test well at a depth of 6,604 feet. The string was 32-pound screw pipe with a total weight of 225,000 pounds. Not only was this a record length of 8¼-inch pipe but the fact that it was set in sections instead of the usual method makes this a feat of importance as well as of interest.

The next longest string of 8¼-inch casing is probably that set by the Mills Sennett Production Co. in their Kirby No. 1 at Barbors Hill, Tex. This well was cased with a string of 8¼-inch 32-pound casing 4,273 feet long.

A record was established in carrying the 10-inch hole at Lamont to 6,604 feet. Up to this point only 377 feet of 10-inch casing and 43 feet of 13-inch drive pipe had been used. The open hole totaled 6,227 feet. So far as known, this is the deepest 10-inch hole in existence.

At 6,600 feet drilling progress was so hampered by the continuous caving of the hole that it became advisable to set the pipe.

Before casing this well the ordinary methods were considered but each held risks that the company did not care to take if they could be avoided. To float in the pipe in a continuous string necessitated the presence of water in the hole. It had been found from experience that water on the formations encountered caused caving that could not be handled. It was, therefore, essential that the hole be kept dry.

A second method, that of lowering the pipe in one continuous string and supporting the entire weight from the top held at least three possible difficulties. In running 6,600 feet of 32-pound pipe a total weight of 225,000 pounds might result in the dropping of the entire string if there happened to be a flaw in the pipe, thread or coupling. Again with the hole caving badly it was possible for several feet of cavings to fall in while a continuous string of pipe was being coupled and lowered to the bottom. Thirdly, the great thickness of salt formation penetrated continued to "grow" and close

(Continued on Page 185)

LEGAL

TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION
March 28 and 29, 1928
By United States Government

March 28 and 29, 1928, at Pawhuska, Oklahoma, about 90,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual installments, with acceptable security. Within advertised area there are about 9,875 oil wells producing from one barrel to 2,000 barrels each, the total daily production for December, 1927, being about 58,200 barrels; also there are about 85 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

DIVIDEND NOTICE
Imperial Royalties Company

Will pay monthly dividend of 1½% to Preferred Shareholders on March 30. This is Dividend No. 90 and makes a total of 155½% paid to shareholders.

E. S. HORN,
H. O. BLAND,
J. E. HORN, Trustees.
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Detailed Operations in All Fields for Month of February

SUMMARY OF ALL FIELDS

Field—	Comp.	Prod.	Dry	Gas
Eastern	261	2,130	25	66
Central Ohio	23	128	5	14
Lima	17	63	3	7
Indiana	18	185	6	7
Michigan	1	170	0	0
Illinois	14	124	6	1
Kentucky	73	3,610	17	2
Tennessee	22	1,165	11	3
Oklahoma	230	51,955	114	42
Kansas	94	10,615	34	10
Texas Panhandle	26	9,214	1	4
North Central Texas	260	11,289	108	9
West Texas	102	222,851	25	2
East Texas	12	.....	4	8
Southwest Texas	57	431	30	17
East Central Texas	7	85	6	0
North Louisiana	47	485	17	22
Arkansas	15	939	8	1
Wyoming	39	628	27	1
Montana	9	113	7	0
Colorado	8	2,555	2	0
New Mexico	4	20	2	0
Gulf Coast	103	40,652	49	1
Total Feb.	1,490	359,407	507	217
Total Jan.	1,368	455,831	432	214
Difference	122	96,424	75	3

Summary of New Work

Field—	Rigs	Drlg.	Ttl.
Eastern	101	272	373
Central Ohio	11	58	69
Lima	4	24	28
Indiana	5	48	53
Illinois	3	20	23
Michigan	8	18	26
Tennessee	0	22	22
Kentucky	8	173	181
Mississippi	2	18	20
Alabama	0	7	7
Florida	0	13	13
Oklahoma	148	653	801
Kansas	66	205	271
Texas Panhandle	26	143	169
West Texas	118	310	428
North Central Texas	70	403	473
Southwest Texas	17	123	140
East Central Texas	2	8	10
East Texas	2	17	19
Louisiana	43	116	159
Arkansas	13	44	57
Wyoming	116	126	142
Montana	22	80	102
Colorado	15	87	102
Utah	2	28	30
New Mexico	11	91	102
Gulf Coast	31	165	196
Total Feb.	744	3,272	4,016
Total Jan.	806	3,336	4,142
Difference	62	64	126

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	3	491	0	0
Creek	24	867	11	4
Grady	16	0	5	11
Kay	19	70	10	8
Muskogee and Wagoner	21	295	13	4
Okfuskee	7	635	1	1
Okmulgee	20	72	11	4
Osage	32	10,445	9	2
Pontotoc	9	805	5	2
Pottawatomie	10	4,329	3	0
Seminole	54	29,707	13	0
Stephens & Cotton	13	1,498	4	1
Tulsa	11	135	8	0
Miscellaneous	41	2,606	21	5
Total February	280	51,955	114	42
Total January	309	41,625	99	63
Difference	29	10,330	15	21

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Carter	7	20	27
Creek	26	63	89
Garfield	0	11	11
Grant	1	13	14
Grady	7	30	37
Kay	4	33	37
Lincoln	0	8	8
Logan	3	23	26
Muskogee and Wagoner	6	29	35
Okfuskee	14	22	36
Okmulgee	10	28	38
Osage	11	57	68
Pawnee	2	14	16
Payne	1	11	12
Pontotoc	6	34	40
Pottawatomie	9	44	53
Seminole	25	100	125
Stephens and Cotton	5	26	31
Tulsa	3	14	17
Miscellaneous	8	73	81
Total February	148	653	801
Total January	138	710	848
Difference	10	57	47

WELLS COMPLETED
CARTER COUNTY

19-1s-3w McCrory, Magnolia Pet. Corp.. 2 ... 45
23-1s-3w Crockett, Schermerhorn et al. 1 265
14-1s-3w Carter, Magnolia Pet. Corp., 2 ... 181

Wells completed 3
Production 491

CREEK COUNTY

12-19- 8 Porter, J. B. Grieves Oil 4 ... 25
13-19- 8 Miller, Burlingane & Sharp 14 ... 25
18-19- 9 Clark, Roxana Pet. Corp. 2 ... gas
13-17-10 Thomas, Irelan et al 1 ... dry
5-16- 5 Dahlke, T.P.C.&O. Co. 1 ... dry
36-15- 7 Lee, Empire O. & R. Co. 1 ... 50
17-14-10 Peters, Edgewood Oil et al 2 ... dry
18-14-10 Harjo, Mid-Continent Pet. 1-A gas
20-18- 7 Wacoche, Sinclair O. & G. 9 ... dry
24-18-11 Strip, Miller et al 1 ... dry
8-17-10 Pemberton, W. S. Truman 4 ... 92
36-15- 7 Strip, Bu-Vi-Bar Pet. Co. 2 ... gas
25-18-11 Tiger, Kennedy & Horner et al 2 ... dry
24-17- 9 Dickson, Skelly Oil and Holmes 1 ... 300
14-16-11 Gilles, Summit Drlg. Co. 1 ... 60
26-16-11 Martin, Paraffine Oil 2 ... dry
36-15- 7 Bigpond, Olean Pet. Co. 4 ... gas
3-15- 8 West, Bu-Vi-Bar Pet. Co. 1 ... dry
28-18- 9 McIntosh, H. U. Bartlett 1 ... 15
35-18-10 Thomason, Hemlock Oil 1 ... dry
1-17-10 Brown, Chief Drlg. Co. 1 ... dry
23-17-10 Townlot, L. & D. Oil Co. 2 ... dry
4-17-11 Deenun, J. Winemiller et al 1 275
10-15- 8 Miles, H. C. Wilson 1 ... dry

Wells completed 24
Production 867
Dry 11
Gas 4
Gas production 38,000,000

GRADY COUNTY

13-7-5w Kemp, Bedner et al 1 ... dry
12-4-8w Dent, Watchorn O. & G. 1 ... gas
23-4-8w Milleur, H. A. Milleur 1-A ... gas
26-5-8w McCaughtry, Carter Oil 1 ... gas
35-5-8w Duke, Magnolia Pet. 3 ... gas
36-5-8w Rogers, Watchorn O. & G. 1 ... dry
34-3-5w Nation, Hall & Briscoe 5 ... dry
23-5-8w K. Farwell, Meridian Gas 4-A ... gas
K. Farwell, Okla. Gas Utilities 4 ... gas
2-4-8w Wood, Okla. Gas Utilities 2 ... gas
17-3-5w Burke, Wirt Franklin Oil 1 ... dry
3-4-8w Dryden, Prairie O. & G. 4 ... dry
26-5-8w Farwell, Okla. Gas Utilities 8 ... gas
35-5-8w McCaughtry, Little Nick 4 ... gas
1-4-8w Woods, J. J. Hall 1 ... gas
25-4-8w Soloman, Galton Camp (tr.) 1 ... gas

Wells completed 16
Dry 5
Gas 11
Gas production 321,000,000

KAY COUNTY

17-29- 1 Dickerson, Marland Oil 2 ... 70
18-29- 1 Cole, Tidal Oil 1 ... gas
30-28- 1w Warren, Geo. Dickey 1 ... dry
36-28- 1w Schoolland No. 76, Dewey & Hoffer 2 ... gas
1-27- 1w Lewis, Ivan Otstot et al 1 ... gas
16-29- 1w Brown, Comar Oil 1½ ... gas
28-29- 1 Parker, Four Leaf Gas 1 ... dry
12-28-1w Fulton, Harris & Haun 1 ... dry
1-27- 1w Attebury, O'Shaughnessy et al 1 ... 705
9-27- 1w Brown, Harris & Haun 4 ... dry
16-27- 1w Barr, Otstot Dev. 3 ... dry
36-28- 1w School land, Industrial O. & G. Co. 3 ... gas
29-28- 1 Elder, Fred & Morgan 1 ... gas
28-27- 1w Lentz, Industrial O. & G. 1 ... dry
22-29- 1w LaMar, Harris & Haun 2 ... dry
19-29- 1 Skein, Greer & Walters 2 ... dry
29-29- 1 Swenson, Empire O. & R. 1 ... dry
30-29- 1 Hobough, Harris & Haun 2 ... gas
36-28- 1w School land, Prairie O. & G. 1 ... gas

Wells completed 19
Production 70
Dry 10
Gas 8
Gas production 29,500,000

MUSKOGEE AND WAGONER COUNTIES

6-14-19 Timberlake, J. W. Hale et al 2 ... 15
29-18-16 Prince, Striker 2 ... dry
17-15-15 Thompson, J. A. Swindler 2 ... gas
5-13-16 Flowers, J. R. Graves et al 1-A ... 40
11-18-17 Wilson, C. M. Bradley 1 ... dry
9-15-15 Lowery, Bryan & Emery 1 ... dry
6-14-19 Clark, Hale-Ford Oil 2 ... 225
23-18-15 Norfer, Elk Drlg. Co. 1 ... dry
35-17-17 Williams, C. R. Cane 1 ... gas
6-16-15 Elder, Commercial Dev. Co. 4 ... dry
9-15-15 Lowery, P. Boyle et al 1 ... 15
20-15-16 Woodall, J. M. Foltz 1-A ... gas
9-15-18 Stidham, J. L. Haner 2 ... gas
2-14-18 Callahan, J. L. Dixon 5 ... dry
2-14-19 Thompson, J. A. Evans et al 1 ... dry
5-14-19 Kelley, J. D. Linthecum 2 ... dry
6-14-19 Crittenden, Towner & Witt 4 ... dry
20-18-15 Taylor, Linden & Davis 1 ... dry
19-18-18 Colbert, A. Chapman 2 ... dry
23-16-16 Marshall, Peterson & Young 1 ... dry
3-16-18 Colbert, R. H. Ford & Silsbee 1 ... dry

Wells completed 21
Production 295
Dry 13
Gas 4
Gas production 16,200,000

OKFUSKEE COUNTY

34-12- 8 Knight, Transcontinental Oil 1 ... dry
15-11-11 Washington, Champlin O. & R. Co. 4 ... 125
30-11-11 Holmes, Minnehoma Oil 2 ... 25
30-11-11 Holmes, Riverland Oil 2 ... 250
14-11-11 Ingram, Champlin O. & R. 2 ... 225
7-11-12 Holmes, Moffitt et al 5 ... 10
21-10- 9 Tecumseh, Phillips Pet. et al 1 ... gas

Wells completed 7
Production 635
Dry 1
Gas 1
Gas production 30,000,000

OKMULGEE COUNTY

20-14-11 Sizemore, T. D. Young & Garrett 1-A ... dry
6-15-13 Jones, Devonian Oil 1 ... gas
17-15-13 Bell, Kirkland & Son 7 ... 10
11-15-14 Adams, F. D. Misener 2-A ... dry
14-14-13 Jones, E. P. Jones et al 2 ... 10
27-14-13 Byrd, W. B. Pine 4 ... gas
18-14-15 Rentie, F. A. Roberts 4 ... dry
36-16-13 Cooper, Sunray Oil 1 ... dry
15-13-12 Carter, Sheldon Oil et al 1 ... 32
16-14-14 Colbert, J. W. Sharpe et al 5 ... dry
11-13-14 Kershaw, F. D. Misener 4 ... dry
25-16-13 Francis, Papoose Oil 2 ... dry
9-15-14 Tucker, T. H. McBrayer et al 2 ... gas
14-14-14 Colbert, J. E. Wallace 6 ... 10
20-14-15 Deer, J. L. Powell 1 ... dry
20-12-13 Burgess, B. Shepherd 1 ... 10
9-15-14 Ware, Carr Peterson 5 ... gas
14-14-13 Jones, E. P. Jones et al 1 ... dry
7-14-11 Farmer, Amerada Pet. et al 1 ... dry
12-14-12 Warren, A. C. Saint et al 1-A ... dry

Wells completed 20
Production 77
Dry 11
Gas 4
Gas production 48,500,000

OSAGE COUNTY

3-28- 8 Beacon Oil Co 1 ... dry
3-26- 6 Kewanee O. & G. Co. 5 ... 565
Kewanee O. & G. Co. 6 ... 885
11-26- 6 Phillips Pet. Co. 1 ... dry
11-26- 6 Geo. Parker 5 ... dry
6-21- 9 A. D. McDonnell 1 ... 3
27-21-12 Duffield, Howard et al 1 ... dry
33-21-12 Okla. Natural Gas Corp. 779 ... dry
20-27- 6 Prairie O. & G. Co. 6 ... 175
Prairie O. & G. Co. 7 ... 150
5-27-11 Osage Gas Prod. Co. 384 ... gas
22-27-11 L. T. I. Oil Co. 381 ... gas
26-22- 8 H. H. Mundy 2 ... dry
28-27- 6 Kewanee O. & G. Co. 2 ... 750
Kewanee O. & G. Co. 5 ... 1500
34-27- 6 Kewanee O. & G. Co. 6 ... 230
2-26- 6 Lewis Production Co. 1 ... 861
Lewis Production Co. 2 ... 900
26-25- 9 Peters Pet. Co. 2 ... 200
Peters Pet. Co. 3 ... 763
28-21-10 Tidal Oil Co. 3 ... 25
33-21-10 Devonian Oil Co. 4 ... 30
19-23- 7 Prairie O. & G. Co. 1 ... dry
17-27- 6 Phillips Pet. Co. 7 ... 900
28-27- 6 Gypsy Oil Co. 4 ... 935
Kewanee O. & G. Co. 1 ... 400
Kewanee O. & G. Co. 6 ... 1602
3-26- 6 Carter Oil Co. 4 ... 357
5-24- 8 McCuen, Wormser et al 1 ... dry
4-23-10 Delmar Oil Co. 1 ... dry
17-23-10 New England O. & P. L. 1 ... 5
27-21-10 Mid-Kansas and Devonian 1 ... 10

Wells completed 32
Production 10,445
Dry 9
Gas 2
Gas production 3,750,000

PONTOTOC COUNTY

20- 5- 8 Perry, Louisiana O. & R. 6 ... gas
29- 5- 8 Harjo, W. R. Ramsey 1 ... dry
14- 4- 7 Johnson, Henry et al 1 ... dry
28- 5- 6 Brown, Conservative O. & G. 1 ... dry
17- 5- 8 Harjo, Louisiana O. R. 7 ... gas
19- 5- 8 Berry, Homaokla Oil 1 ... 655
28- 5- 6 Norris, Conservative Oil 1 ... dry
19- 5- 8 Perry, Louisiana O. R. 12 ... 150
21- 5- 8 Shipley, W. R. Ramsey 1 ... dry

Wells completed 9
Production 805
Dry 5
Gas 2
Gas production 40,000,000

POTTAWATOMIE COUNTY

9- 9- 5 Gibson, Barnsdall Oil 7 ... 35
13- 7- 3 Wilson, Magnolia Pet. 1 ... dry
36- 7- 3 School land No. 76, Magnolia Pet. 1 ... 38
14- 7- 4 Wallace, Independent and Darby 1 ... 705
16- 8- 5 State, I. T. I. Oil 1 ... 281
25- 7- 3 Sullivan, I. T. I. Oil 1 ... 3030
14- 7- 4 Hamby, Independent, Darby & Gypsy Oil 2 ... 100
19- 7- 4 Talley, Magnolia Pet. 2 ... 140
32-11- 2 Pickard, Wilcox O. & G. 1 ... dry
16-10- 5 School land, Clark & Edwards et al 1 ... dry

Wells completed 10
Production 4329
Dry 3

SEMINOLE COUNTY

11- 9- 5 J. Davis, Barnsdall Oil 4 ... 180
3- 9- 6 Strothers, Roxana Pet. 2 ... 710
10- 8- 6 Strothers "F," Pure Oil 3 ... 845
10- 8- 6 Harjoche, Tidal Oil 7 ... 425
13- 8- 6 Fay, I. T. I. Oil 9 ... 110
14- 8- 6 Reed, The Texas Co. 12 ... 300
15- 8- 6 Walker, Carter Oil 4 ... 69
23- 8- 6 Burden, Carter Oil 3 ... dry
23- 8- 6 Hilly, Carter Oil Co. 3 ... 550
35- 8- 6 Pattey, Magnolia Pet. 1 ... 560
Pattey, W. B. Pine and Phillips Pet. 3 ... 602
36- 8- 6 Fish, Carter Oil Co. 4 ... 525
Marcome, Shaffer O. & R. 1 ... 400
15- 8- 8 Sewell, Independent O. P. and Champlin & Bass 2 ... dry
1- 7- 6 Gosey, Magnolia Pet. 1 ... dry
2- 9- 5 Sango, Sinclair O. & G. 2 ... 935
10- 9- 5 Pack, Barnsdall Oil 3 ... 142
12- 9- 5 Sullivan, Magnolia Pet. 3 ... dry
10- 8- 6 Cumsey, Sinclair O. & G. 4 ... 1909
11- 8- 6 Jones, Carter Oil 4 ... 350
12- 8- 6 Smith, Mid-Continent Pet 8 ... 195
13- 8- 6 Davis, Magnolia Pet. 3 ... 302
21- 8- 6 McCiesy, Carter Oil 1 ... 50
22- 8- 6 Bowlegs, Mid-Continent Pet. 2 ... dry
24- 8- 6 Work, I. T. I. Oil 2 ... 135
7- 5- 8 Fleet, Mid-Continent Pet. 2 ... 1180
13- 9- 5 Davis, Prairie O. & G. 5 ... 6000
12- 8- 6 Templeton, Prairie O. & G. 5 ... 3000
33-10- 6 Saloche, Mid-Continent Pet. 4 ... 900
3- 9- 5 Roger, Amerada Pet. 4 ... dry
12- 9- 5 Seay, Magnolia Pet. 10 ... 484
11- 8- 6 Jones, Twin State Oil 3 ... 125
13- 8- 6 Davis, I. T. I. Oil 6 ... dry
14- 8- 6 Lacey, Empire O. & R. 8 ... dry
15- 8- 6 Walker, Carter Oil 3-A ... 95
2- 7- 6 Nitey, I. T. I. Oil 3 ... 301
5- 7- 7 Johnson, Sinclair and Darby 1 ... dry
1- 9- 5 Sango, Barnsdall Oil 1 ... 254
Ingram, Barnsdall Oil 2 ... 473
Clark, Shaffer O. & R. 3 ... dry
Clark, Shaffer O. & R. 6 ... 1027
2- 9- 5 Hearn, Twin State 4 ... 800
3- 9- 5 Edmundson, Magnolia Pet. 4 ... dry
8- 9- 5 Knapp, Independent and Darby 8 ... dry
11- 9- 5 Gaines, Independent and Margay 2 ... 100
3- 9- 6 Aldridge, Pure Oil 6 ... 50
Strothers, Roxana Pet. 3 ... 140
10- 9- 8 Gutner, Jarvis & Holm et al 1 ... 60
4- 9- 6 Cobb, Gypsy Oil 4 ... dry
10- 8- 6 W. Taylor, Sinclair O. & G. 1 ... 2082
22- 7- 6 Hotulka, Barnsdall Oil 1 ... 70
8- 5- 8 Punluste, Louisiana O. R. 1 ... 1183
18- 5- 8 Reed, Louisiana O. R. 3 ... 604
18- 5- 8 Cully, Ramsey Oil 1 ... 576

Wells completed 54
Production 29,707
Dry 13

STEPHENS AND COTTON COUNTIES

13-1s-4w Martin, Magnolia Pet. 1 ... gas
Martin, Magnolia Pet. 2 ... 100
32- 1-8w A. Morgan, Magnolia Pet. 2 ... dry
27-1s-8w Cummings, McAlester et al 2 ... 6
12-2s-8w Robb "D" Geo. Pace et al 2 ... 10
12-2s-4w Sheids, Schermerhorn et al 2 ... 1157
12-2s-8w Massey, Owen & Wood 9 ... dry
29- 1-8w Shaffer-Young, Magnolia Pet. 3 ... dry
34-1s-8w Burke, Medlin et al 1 ... 180
34-1s-10w Smith, Jenkins et al 2 ... 25
27-1s-8w Tallaferro, Harry Hanbury 6 ... 10
34-1s-8w Burke, David Malernee 1-A ... dry
3-3s-5w Edwards, Toughy et al 2 ... 10

Wells completed 13
Production 1498
Dry 4
Gas 1
Gas production 70,000,000

TULSA COUNTY

24-19-10 Ragen, Holmes et al 1 ... dry
23-19-11 Combs, Glidden Oil 1 ... dry
27-19-11 Russell, Sheridan Oil 2 ... 10
16-19-14 Franklin, C. T. Dresser 1 ... dry
8-16-14 Agent, Savoy Oil Co. 1 ... dry
6-19-10 McKee, Superior Oil 8 ... 100
11-17-12 Glenn, A. J. Spears 7 ... dry
22-19-10 Ragan, Holmes et al 1 ... dry
5-19-11 Mitchell, Regal O. & G. 4 ... dry
7-17-13 Brown, E. B. George et al 1-A ... 25
14-17-13 Allen, Enfisco Oil 1 ... dry

Wells completed 11
Production 135
Dry 8

MISCELLANEOUS COUNTIES

Coal County—
10- 9-11 Burris, I. T. I. Oil 1-A ... dry

Jefferson County—
17-7s-5w Lahman, Heydrick & Hivick 1 ... dry
34-6s-5w Seay, Beck & Lapham 1 ... 20

LeFlore County—
22- 7-26 Linder, LeFore G. & E. 79 ... gas
Tucker, LeFlore G. & E. 81 ... dry
33- 7-26 Towery, Geo. F. Collins 1 ... gas

Love County—
7-7s- 3 Askew, Magnolia Pet. 1 ... dry

Canadian County—
18-13-10w North, Carroll Oil 1 ... dry

Cimarron County—
4-5-6ecm State, Ramsey Bros. C-1 ... dry

Garfield County—
36-22-4w Metcher, Sinclair O. & G. 18 ... 10

Logan County—
31-19-4w Williams, L. H. Wentz 1 ... dry
33-19-4w Scott, Bryan & Emery 1 ... dry
29-19-4w Ross, Roxana Pet. 1 ... 716
32-19-4w Williams, Roxana Pet. 1 ... 336
16-18-4w Gragg, Marland Oil 1 ... 411
28-18-4w Quigley, Ramsey Bros. 1 ... dry

Beckham County—
5-8-23w Taylor, Price Bros., Atlantic et al 1 ... dry

Sequoyah County—
7-11-27 Packard, Citizens Gas 1 ... dry

Caddo County—
5-5-9w Cutshall, English Drlg. Co. 3 ... 76

Comanche County—
10-2-10w Spitler, Danciger Oil 1 ... dry

Washington County—
8-26-13 Whiteturkey, National O. & D. Co. 1 ... 1
12-25-12 Irwin, John Irwin 1 ... dry

Hughes County—
31- 5- 9 Tyger, Winkler & McQueen 1 ... dry

Rogers County—
9-21-17 Williams, Mrs. Lee F. Ross et al 1 ... 20
24-22-16 Long, John Byall et al 2 ... 10
25-24-16 Nicholson, Frank E. Bushfield et al 1 ... dry
19-22-17 Spears, Skelly Oil et al 1 ... dry
25-21-17 Setzer, Creo Oil 1 ... dry
26-21-17 Setzer, F. C. Ingram 1 ... dry
3-21-17 Bump, Skelly Oil et al 1 ... dry

Nowata County—
7-26-16 Clagget, Dr. Kandall 1 ... 2
18-29-15 Maxwell, Gaune et al 1 ... dry

Grant County—
36-28-3w School land, Washoma Oil and Roxana Pet. 1 ... gas
22-27-3w Lane, Prairie O. & G. 3 ... 450

Lincoln County—
6-15- 5 Lindsey, I. T. I. Oil 2 ... 280

Payne County—
33-19- 5 Eagle, Wood Oil 1 ... 30
7-18- 4 Knott, Payne Co. Gas Co. 2 ... 125
29-20-9 Green, Wallace et al 1 ... 6
9-20-9 McClure, Markham & Shoefeldt 2 ... dry
29-20-9 Smelser, Turner et al 2 ... gas

Pittsburg County—
17- 7-18 Houston, Quinton Spelter Co. 1 ... gas

Wells completed 41
Production 2606
Dry 21
Gas 5
Gas production 23,632,500

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	8	440	5	0
Cowley	13	197	8	4
Chautauqua and Elk	5	210	1	4
Greenwood	24	2,295	6	6
Sumner	16	7,149	0	1
Miscellaneous	28	324	14	4
Total, February	94	10,615	34	16
Total January	137	14,337	47	11
Difference	43	3,722	13	5

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	5	15	20
Chautauqua and Elk	2	10	12
Cowley	7	31	38
Greenwood	17	24	41
Marion	5	33	38
Russell	6	6	12
Sumner	15	32	47
Miscellaneous	9	54	63
Total February	66	205	271
Total January	63	185	248
Difference	3	20	23

WELLS COMPLETED
BUTLER COUNTY

21-25- 4 Albers, Dixie Oil ... 40
4-27- 6 Shaffer, Rosenthal et al 8 ... 250
21-28- 5 Clubine, Madison et al 1 ... dry
24-28- 6 Tavender, Liggett et al 1 ... dry
17-27- 6 Getter, Richmond Drlg. Co. 1 ... dry
31-26- 6 Fisher, Paul et al 1 ... dry
22-26- 4 Pyle, Blankenship Pet. 1 ... dry
4-27- 6 Shaffer, Rosenthal et al 9 ... 150

Wells completed 8
Production 440
Dry 5

COWLEY COUNTY

20-30- 3 Nave, Roxana Pet. 1 ... dry
21-31- 4 Hittle, Trees Oil 1 ... 197
7-33- 3 Patterson, Barnsdall Oil 1 ... dry
24-33- 6 Dobson, Kentucky N. & O. 1 ... gas

Dobson, Kentucky N. & O. 2 .. gas
16-30- 4 Dickinson, Trees Oil 2 ..... dry
22-32- 4 Winfield townsite, Roth & Faurot 1 ..... gas
12-33- 5 Richardson, Roth & Faurot 1 .. dry
31-34- 7 Gearhart, Pryor & Lockhart 1 dry
27-30- 3 Seaman, Derby Oil 1 ..... dry
5-33- 5 Henderson, Boggs Drlg. Co. 1 gas
Bell, Neeley O. & G. 1 ..... dry
7-35- 3 Victory, Engran & Wilson 1.. dry

Wells completed 13
Production 197
Dry 8
Gas 4
Gas production 10,160,000

CHAUTAUQUA AND ELK COUNTIES

14-31-10 Webb, Union Gas 22 ..... gas
4-30- 9 Denton, Elk Pet. 1 200
5-31-10 Vick, Union Gas 1 ..... dry
8-31-10 Eyman, Hood et al 2 10
27-31-10 Marshall, Theta Oil 3 ..... dry

Wells completed 5
Production 210
Dry 1
Gas 1
Gas production 1,250,000

GREENWOOD COUNTIES

22-22-12 Fankhouser, Theta Oil 4 100
35-23-11 Brothers, Eureka Oil 1 ..... dry
8-23-13 Knox, Golden et al 1 ..... dry
36-24-12 Steckle, Bisagno et al 1 15
8-25-13 Haggart, Empire O. & R. 1 .. 35
10-25-13 Roglin, Bisagno et al 2 15
24-22-12 Fankhouser, Darby Pet. 6 100
25-22-12 Demler, Empire O. & R. 7 180
Ott "A," Empire O. & R. 5 200
Schwab, Empire O. & R. 7 300
26-24- 9 Holverson, Polhamus et al 2 .. dry
8-25-13 Webber, Prairie O. & G. 1 .. dry
10-22-10 Pixlee, Transcontinental Oil 2 dry
30-22-13 Schwab, Darby Pet. 5 375
31-24-13 Christy, Christy et al 1..... 10
3-26-10 Brown, Rogers et al 30
7-27-11 Cross, Mohawk Oil 1 20
23-22-12 Fankhouser, Theta Oil 5 25
25-22-12 Ott "A," Empire O. & R. 6 150
Ott "A," Empire O. & R. 7 125
Schwab, Empire O. & R. 9 420
36-22-13 Schwab, Simmons & Rhodes 1 150
6-24-11 Freeman, Marcus et al 1 45
28-27-13 Smith, Culp et al 1..... dry

Wells completed 24
Production 2295
Dry 6

SUMNER COUNTY

22-30-2w Bryan, De Frost Drlg. Co. 1 .. gas
26-31- 2 Jenkins, Washoma Oil et al 2 50
14-32- 2 Buffington, La Robb Oil 2 525
Burkett, Derby Oil 2 170
Emerich, Roxana Pet. 5 1000
Nevitt, Roxana Pet. 3 300
Scroggins, Roxana Pet. 1 800
Gassoway, Wasson et al 2 1500
24-31- 2 Stout, Roxana Pet. 1 200
14-32- 2 Emerich, Roxana Pet. 8 200
Gassoway, Wasson et al 3 1000
23-32- 2 Miller, Roxana Pet. 1 219
26-31- 2 Taton, Roxana Pet. 4 689
14-32- 2 Emerich, Mead et al 1 288
23-32- 2 Wenerich, Palmer and Barnsdall Oil 1-A 50
14-32- 2 Bussard, Roxana Pet. 1 156

Wells completed 16
Production 7149
Gas 1
Gas production 1,000,000

MISCELLANEOUS COUNTIES

Barton County—
17-19-11w Smith, Huffine et al 1 ..... dry
Russell County—
5-14-15w Merimis, Midwest Refg. 3 .. 120
Saline County—
17-15-2w Muir, Mentor O. & G. 1 ..... dry
Bourbon County—
23-24-21 Thompson, Harris et al 2.... gas
18-26-21 Swigett, Frank J. Pavlicek 2. gas
23-24-21 Thompson, Harris et al 1 .... gas
Rooks County—
3-10-16w Kruse, Derby Oil 1 35
Montgomery County—
1-32-16 White, Ada Lomax 18 2
17-34-17 Fair, Jesse Graham 5 ..... dry
5-35-16 Winchill, E. R. Dick 1 ..... gas
2-34-13 Dunham, J. P. Brady 7 25
Partridge, Paul C. Clements 2 dry
Wabaunsee County—
19-12-11 Schwalm, Empire O. & R. 1 .. dry
Anderson County—
4-22-19 Fee, Radio O. & G. 8 15
13-21-20 Ewing "B," American Controlled Oil 32 40
4-21-21 Woodburn College, Schermerhorn Oil 1 17
Coffey County—
9-22-15 Goff, Garland et al 1 ..... dry
Miami County—
29-17-23 Wallace, Nort & Reecer 1 ... dry
35-16-21 Benett, J. C. McAnulty 13 .. dry
36-18-22 Jennings, Pryor & Loenhurst 2 10
16-17-23 Miller, Shumann et al 1 ..... dry
17-17-23 Biltis, Shuman et al 1 ..... dry
8-17-23 Patterson, Shumaker et al 1 .. dry
Geary County—
16-12-7 Pawley, Brinkley et al 1 .... dry
McPherson County—
1-17-3w Lamar, Lamar et al 1 ..... dry
Marion County—
22-17- 4 Mowrer, Phillips Pet. 1 40
31-17- 4 Ucker, Givens et al 1 ..... dry
Woodson County—
21-23-14 Otto, Young et al 1 20

Wells completed 28
Production 324
Dry 14
Gas 4
Gas production 785,000

LOUISIANA-ARKANSAS

NORTH LOUISIANA
Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg	Ttl
Bienville	1	0	0	1	1	2	3
Bossier	6	30	1	4	3	18	21
Caddo	†10	405	5	0	9	20	29
Caldwell	0	0	0	0	0	1	1
Catahoula	0	0	0	0	2	2	4
Claiborne	1	0	1	0	1	1	2
DeSoto	1	0	1	0	2	9	11
Franklin	1	0	1	0	0	2	2
Grant	2	0	2	0	0	3	3
LaSalle	1	0	1	0	0	2	2
Monroe District	9	0	2	7	10	16	26
Natchitoches	0	0	0	0	0	1	1
Rapides	0	0	0	0	0	2	2
Red River	1	3	0	0	0	1	1
Richland	8	0	2	6	6	15	21
Sabine	2	20	1	0	1	7	8
Webster	4	0	0	4	8	11	19
West Carroll	0	0	0	0	0	1	1
Winn	0	0	0	0	0	2	2
Total Feb.	47	485	17	22	43	116	159
Total Jan.	39	644	17	11	48	123	171
Difference	8	159	0	11	5	7	12

†One well also producing gas.
*Gas production: Caddo, 2,000,000; Bossier, 121,000,000; Monroe district, 72,080,000; Richland, 287,872,290; Webster, 18,500,000; total, 501,452,290.

ARKANSAS
Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg	Ttl
Bradley	0	0	0	0	0	1	1
Clark	0	0	0	0	1	1	2
Clay	0	0	0	0	0	1	1
Columbia	1	0	1	0	2	2	4
Faulkner	0	0	0	0	0	1	1
Franklin	0	0	0	0	0	1	1
Garland	0	0	0	0	0	2	2
Grant	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	1	1
Lincoln	0	0	0	0	0	1	1
Little River	0	0	0	0	0	1	1
Logan	0	0	0	0	1	0	1
Lafayette	1	0	1	0	0	0	0
Miller	0	0	0	0	0	2	2
Nevada	1	50	0	0	0	1	1
Ouachita	2	0	1	1	0	2	2
Pike	0	0	0	0	0	2	2
Poinsett	0	0	0	0	0	1	1
Pope	0	0	0	0	0	1	1
Union	10	889	5	0	9	17	26
Woodruff	0	0	0	0	0	1	1
Total Feb.	15	939	8	1	13	44	57
Total Jan.	34	2,840	24	2	20	48	68
Difference	19	1,901	16	1	7	4	11

*Gas production 3,000,000.

WELLS COMPLETED
BIENVILLE PARISH

16-16-10 State, Lake Bisteneau Gas 1. gas

Gas production 1,500,000

BOSSIER PARISH

36-23-12 Holmes, Bahan & Davis 1 .... gas
15-19-11 Bodcaw, Louisiana Oil Refining Corp., 32-D ..... dry
25-16-12 Hodges, J. S. McCullough, 5 .. 30
31-23-11 Bain, Northwest Louisiana Gas Co., 1 ..... gas
25-16-12 Caplis, Palmer Corp., 10..... gas
30-23-11 Peyton, The Texas Company, 1 gas

Wells completed 6
Production 30
Dry 1
Gas 4
Gas production 121,000,000

CADDO PARISH

20-16-15 Alexander, Arkansas Natural Gas Co., 1 ..... dry
13-21-15 C. W. Lane, Ark. Nat. Gas 1 dry
12-21-15 E. K. Smith, Ohio Oil Co., 25. dry
22-20-15 Baird, Simplex Oil Co., 2 200
34-21-16 J. J. Hart, Standard Oil 17... 75
11-20-16 A. L. Barry, Standard Oil Co., 12 ..... dry
34-21-16 J. J. Hart, Standard Oil Co., 18 50
26-20-15 Youree, Superior Oil Co., 8 5
23-21-15 Caddo Mineral Lands, The Texas Company, 47..... dry
14-21-15*A. Herndon, The Texas Company, 8 75
14-21-15 A. Herndon, The Texas Company, 7 (drk)..... abd

Wells completed 10
Production 405
Dry 5
*Gas production 2,000,000

CLAIBORNE PARISH

16-20-8 Magnolia Petroleum Co., 1..... dry

DE SOTO PARISH

7-10-13 Johnson, Foster and others, 1.. dry

FRANKLIN PARISH

2-15-7 Baker, Barbour Oil Co., 1..... dry

GRANT PARISH

4-7-4w Calhoun, W. D. Ball and others, 1 ..... dry
10-7-4w Elias Williams, W. D. Ball and others, 1 ..... dry

LA SALLE PARISH

2-9-1e Gibson, Wingfield and others, 2. dry

MONROE DISTRICT

14-20-4 Perry, Consolidated Carbon Co., 1 ..... gas
14-20-4 Southern Carbon Co., C. E. Jordan, 1 ..... dry
13-20-4 Wolf, Moody & Seagraves, 1 .... gas
23-15-3 Cordell, Coco Bend Oil & Gas Co., 1 ..... dry
1-18-4 Edwards, J. M. Huber, 4..... gas
13-19-3 Stubbs, Imperial Oil & Gas Products Co., 4 ..... gas
1-19-3 U. S. Govt., Moody & Seagraves, 1 ..... gas
37-19-4 Smith, Ouachita Natural Gas Co., 8 ..... gas
8-19-4 Phillips, Southern Carbon Co., 3 gas

Wells completed 9
Gas 7
Gas production 72,080,000
Dry 2

RAPIDES PARISH

38-5-4w Richey, G. W. Sabatier, 2 (loc) abd

RED RIVER PARISH

25-13-11 Richardson, J. H. Askew, 2.... 30

RICHLAND PARISH

34-16-5 Hasch, Moody & Seagraves..... gas
29-16-6 Hemler, Moody & Seagraves. 1-C gas
18-16-6 LaFleur, Moody & Seagraves. 1. gas
14-15-5 W. T. Osborn and others, Moody & Seagraves, 1 ..... dry
9-16-6 Sartor-Phillips, Natural Gas & Fuel Corp. ..... gas
21-16-6*Thompson, Natural Gas & Fuel Corp., 1-A ..... gas
17-16-6 Sartor, Ruston Drilling Co., 1.. gas
23-16-5 Wayne Land & Timber Co., Palmer Corp., 2..... dry

Wells completed 8
Gas 6
Gas production 287,872,290
Dry 2

*Cratered week after completion.

SABINE PARISH

20-10-12 Steinfelt, Dixie Oil Co., 1..... dry
23-10-12 Moore, Seip and others, 1..... 20

WEBSTER PARISH

36-23-10 North Central Texas, Arkansas Natural Gas Co., 1 ..... gas
14-21-10 J. Babb, Humble Oil & Refining Co., 5..... gas
26-21-10 M. E. Gray, Humble Oil & Refining Co., 1 ..... gas
29-23-9 H. L. Munn, Magnolia Petroleum Co., 1..... gas

Wells completed 4
Gas 4
Gas production 18,500,000

ARKANSAS
Columbia County

3-16-21 Runyon, Sunny Jim Oil Co., 1-A dry

LAFAYETTE COUNTY

31-19-24 Kensaw, Kensaw Syndicate, 1.. dry

NEVADA COUNTY

6-14-20 Robert Haynie, J. J. O'Brien, 5-A 50

OUACHITA COUNTY

21-14-17 J. W. Reynolds, A. T. Grayson, 1 ..... dry
5-16-15 Goodwin, Standard Oil Co., 1-B gas

Gas production 3,000,000

UNION COUNTY

12-17-15 Ezell, W. R. Keever, 5 20
2-17-14 Crain, E. M. Jones, 2..... 624
2-17-14 Crain, E. M. Jones, 3..... dry
12-16-16 Houston, Laurel Oil & Gas Co., 1 ..... dry
11-16-16 Leverett, Lion Oil Refining Co., 1 ..... dry
8-16-15 Murphy, Lion Oil Refining Co., 7-D 15
14-17-14 Rowland, Magna Production Co., 1 200
1-17-14 Crain, Ohio Oil Co., 6..... 30
21-17-11 Arkansas Timber Co., Pitcher and others, 1..... dry
17-15-19 Kinard, Pitcher and others, 1.. dry

Wells completed 10
Production 889
Dry 5

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg	Ttl
Cass	1	0	1	0	0	1	1
Harrison	5	0	1	4	1	4	5
Marion	0	0	0	0	0	1	1
Panola	5	0	1	4	1	8	9
Shelby	1	0	1	0	0	1	1
Total Feb.	12	0	4	8	2	15	17
Total Jan.	15	15	2	12	6	19	25
Difference	3	15	2	4	4	4	8

*Gas production: Panola, 12,510,000; Harrison, 12,000,000; total, 24,510,000.

Cass County

W. S. Lissenbee Sur., Pruitt, The Texas Company, 1 ..... dry

HARRISON COUNTY

James Short Sur., Furrh, Cox et al, 1.. dry
R. W. Bedford Sur., Abercrombie, A. M. Lide et al, 1..... gas
James Short Sur., Furrh, C. H. Lyons et al, 2 ..... gas
R. W. Bedford Sur., A. G. Vincent, Magnolia Petroleum Co., 1..... gas
W. R. Anderson Sur., Vaughn, Tylong Oil & Gas Co., 3..... gas

Wells completed 5
Gas 4
Gas production 12,000,000
Dry 1

PANOLA COUNTY

B. C. Jordan Sur., Roquemore, S. H. Gardner et al, 3..... gas
K. G. Goodman Sur., Jones, Hines et al, 1 ..... dry
J. L. Matthews Sur., T. C. Davis, Magnolia Petroleum Co., 2 (loc) ..... abd
E. F. Mitchell Sur., Sol Oden, Magnolia Petroleum Co. ..... gas
Evans Brackin Sur., Adams, Natural Gas Products Co., 1..... gas
Isom Hatcher Sur., Adams, The Texas Company, 7-B ..... gas

Wells completed 5
Gas 4
Gas production 12,510,000
Dry 1

SHELBY COUNTY

T. F. Polley Sur., Pickering Lumber Co., Sebastian et al, 1..... dry

MISSISSIPPI
MISSISSIPPI
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg	Ttl
Alcorn	0	0	0	0	0	1	1
Chickasaw	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	1	1
Hines	0	0	0	0	0	1	1
Itawamba	0	0	0	0	1	0	1
Jeff Davis	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	1	1	2
Lee	0	0	0	0	0	2	2
Monroe	0	0	0	0	0	7	7
Rankin	0	0	0	0	0	1	1
Stone	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Total	0	0	0	0	2	18	20

Monroe County

4-13-18 Crook, Buffalo Oil Co., 1..... dry

GULF COAST FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	2	13	0	0	2	1	3
Big Creek	2	800	0	0	0	3	3
Boling	13	300	12	0	0	7	7
Blue Ridge	5	1,140	1	0	2	12	14
Barber's Hill	2	0	2	0	0	1	1
Dayton	1	0	1	0	0	0	0
Edgerly (La.)	0	0	0	0	0	5	5
Goose Creek	2	42	0	0	0	6	6
Hull	6	970	0	0	1	7	8
Humble	0	0	0	0	0	0	0
High Island	3	650	1	0	0	4	4
Jennings (La.)	2	0	2	0	1	3	4
Lockport (La.)	2	50	1	0	1	4	5
Markham	1	200	0	0	0	3	3
Nash	2	2,196	0	0	0	6	6
Orange	6	424	4	0	0	7	7
Orchard	0	0	0	0	0	1	1
Pierce Junction	6	3,040	2	0	2	15	17
Saratoga	1	8	0	0	0	1	1
Sour Lake	2	10	1	0	1	3	4
Spindletop	17	17,065	4	0	0	19	19
South Liberty	1	2,500	0	0	0	2	3
Starks	1	0	1	0	0	1	1
Vinton	2	90	0	1	0	4	4
West Columbia	0	0	0	0	0	1	1
Miscellaneous	24	11,164	17	0	21	43	64
Total Feb. 1	103	40,652	49	1	31	165	196
Total Jan. 1*	100	36,870	43	1	51	165	216
Difference	3	3,782	6	0	20	0	20

*Includes 10 Boling completions not recorded in previous January report.

WELLS COMPLETED
BARBERS HILL—CHAMBERS COUNTY

Fee, Bennet Pet. Co. 8 ..... dry
Fisher, S. T., Hindman et al 1 ..... dry

Wells completed 2
Dry 2

BATSON—HARDIN COUNTY

Milholme, Hill & Dowell 95 5
Paraffin, Paraffin Oil Co. 71 5

Wells completed 2
Production 13

BIG CREEK—FORT BEND COUNTY

Davis, Gulf Prod. Co. 24 500
Davis, Gulf Prod. Co. 36 300

Wells completed 2
Production 800

BLUE RIDGE—FORT BEND COUNTY

Blakely, H. R. Cullen 1 540
Blakely, Gordon, Folwell & Dickson 2-A 200
Blakely, Gordon, Folwell & Dickson 3.. 300
Robinson, Navarro Oil Co. 1-A ..... dry
Blakely, Sam Watts et al 3 100

Wells completed 5
Production 1140
Dry 1

BOLING—WHARTON AND FORT BEND

Bay, Patterson-Hyde 1 ..... dry
Kostelink, Sun Oil Co. 1 ..... dry
Chase, Gulf Prod. Co. 9 300
Mullins, Southern Exploration Co. 1 .. dry
Farmer (H. R.), Sun Oil Co. 4 ..... dry
Farmer (H. R.), Sun Oil Co. 5 ..... dry
Chase, Texas Gulf Sulphur Co. 3..... dry
Chase, Texas Gulf Sulphur Co. 7..... dry
Bay, Texas Gulf Sulphur Co. 8 ..... dry
Bay, Texas Gulf Sulphur Co. 11 ..... dry
Cloud, Texas Gulf Sulphur Co. 2..... dry
Bay, Weed-Gayle Oil Co. 14..... dry
Bay, Weed-Gayle Oil Co. 10 ..... dry

Wells completed 13
Production 300
Dry 13
Boling January completions not reported in January:
Waytek, Benson & Abercrombie 2 ..... dry
Waytek, Benson & Abercrombie 3 ..... dry
Keller, Hyde Prod. Co. 1 ..... dry
Farmer (H. R.), Sun Oil Co. 3 ..... dry
Feltz, Texas Gulf Sulphur Co. 1 ..... dry
Kelley, Texas Gulf Sulphur Co. 1 ..... dry
Allen, Texas Gulf Sulphur Co. 2 ..... dry
Bay, Weed-Gayle Oil Co. 4 300
Bay, Weed-Gayle Oil Co. 9 ..... dry
Bay, Weed-Gayle Oil Co. 11..... dry

Wells completed 10
Production 300
Dry 9

DAYTON—LIBERTY COUNTY

Pruett, Deering & Kayser 1 ..... dry

GOOSE CREEK—HARRIS COUNTY

San Jacinto Bay, Gulf Prod. Co. 2..... 22
Duke, Lake Shore Oil Co. 3 20

Wells completed 2
Production 42

HIGH ISLAND—GALVESTON COUNTY

Smith, Gulf Prod. Co. 6 600
Cade, McLean Oil Co. 10 ..... dry
Cade, McLean Oil Co. 11 50

Wells completed 3
Production 650
Dry 1

HULL—LIBERTY COUNTY

Barngrover, Empire G. & F. Co. 26..... 45
Barngrover, Empire G. & F. Co. 27..... 45
Ray, W. E. Flynn 1 30
Phoenix, Gulf Prod. Co. 83 100
Phoenix, Gulf Prod. Co. 88 250
Dolbear, Republic Prod. Co. 94 500

Wells completed 6
Production 970
Dry 0

JENNINGS—ACADIA PARISH

Wilson, Cline, Smith & Cline 1..... dry
Rayne heirs, The Texas Company 2.... dry

Wells completed 2
Production 0
Dry 2

LOCKPORT—CALCASIEU PARISH

Farquahar, Vacuum Oil Co.-Gulf Refining Co. 5 ..... dry
Bayou D'Inde, Vacuum Oil Co.—Gulf Refining Co. 4 50

Wells completed 2
Production 50
Dry 1

MARKHAM—MATAGORDA COUNTY

Kounse, Rycade Oil Corp.-Humble Oil & Refining Co. 5 200

NASH DOME—FORT BEND COUNTY

Wisdom, Rycade Oil Corp. 18 1146
Wisdom, Rycade Oil Corp. 21 1050

Wells completed 2
Production 2196

ORANGE—ORANGE COUNTY

McLean, Brownie-Babbitt Oil Co. 4 ... dry
Bland, Great Southern Oil Co. 1 ..... dry
Leon, Gulf Coast Oil Corp. 5 ..... dry
Hager & Moore, Gulf Prod. Co. 7 124
Lee Hager fee, Gulf Prod. Co. 21 ..... dry
Chesson, Texhoma Oil Co. 8 300

Wells completed 6
Production 424
Dry 4

PIERCE JUNCTION—HARRIS COUNTY

Trapier, Hou-Tex Oil Co. 1 ..... dry
Perry, Gulf Prod. Co. 1 500
Taylor, Gulf Prod. Co. 23 1500
Whitehead, Moody Corp. 2 ..... dry
Cain, Navarro Oil Co. 2-B 800
P.S.A., Rio Bravo Oil Co. 1 240

Wells completed 6
Production 3040
Dry 2

SARATOGA—HARDIN COUNTY

Tabor, Gulf Prod. Co. 13 8

SOUTH LIBERTY—LIBERTY COUNTY

Green, The Texas Company 1 2500

SOUR LAKE—HARDIN COUNTY

Jackson, Elber.s, Tallourne & Hebert 3. dry

Bashara, Humphreys Corp. 1 10

Wells completed 2
Production 10
Dry 1

SPINDLETOP—JEFFERSON COUNTY

Weed, Gulf Prod. Co. 12 ..... dry
Marrs McLean, Gulf Prod. Co. 10-A ..... dry
Marrs McLean, Gulf Prod. Co. 17 3200
Marrs McLean, Gulf Prod. Co. 18 1800
Gladys, Gulf Prod. Co. 29 50
*Fee, Magnolia Pet. Co. 7 ..... abd
Colt, Sun Oil Co. 1 2000
Price, Sun Oil Co. 2 ..... dry
Gladys City, Yount Lee Oil Co. 40 625
McFaddin, Yount Lee Oil Co. 36 100
McFaddin, Yount Lee Oil Co. 51 180
McFaddin, Yount Lee Oil Co. 52 2000
McFaddin, Yount Lee Oil Co. 53 2100
McFaddin, Yount Lee Oil Co. 54 1750
Fee, Yount Lee Oil Co. 11 1320
Fee, Yount Lee Oil Co. 13 600
Fee, Yount Lee Oil Co. 27 1340

Wells completed 17
Production 17,065
Dry and abandoned 4

*Flowed at rate of 1,000 bbls. daily initially but sanded up and was abandoned.

STARKS—CALCASIEU PARISH

Lutcher-Moore, Gulf Refining Co. 8 .... dry

VINTON

Star-Vincent, Gulf Refining Co. 44 90
Gordon, Vinton Pet. Co. 9 ..... gas

Wells completed 2
Production 90
Gas 1

LOUISIANA

Ascension Parish—
Sorrento—United Land Co., Gulf Refining Co. 4 4500
Calcasieu Parish—
Sulphur—Fee, Union Sulphur Co. 719 ... dry
Benckenstein, Lacola Oil Co. 1 ..... dry
Cameron Parish—
Sweet Lake—Sweet Lake, Pure Oil 4 .. 2400
Sweet Lake—Sweet Lake, Pure Oil 5 .. 1500
East Hackberry—Watkins, Calcasieu Oil Co. 1 2400
Big Lake—Cousasieu Lake, Louisiana Land & Exploration Co. A-1 ..... dry
Iberia Parish—
Feussa Point—Broussard, Gulf Ref. Co. 1 dry
Feussa Point—State, Gulf Ref. Co. 3-Z. dry
Vermillion Bay—Louisiana Land & Exploration Co. 1-A ..... dry
St. Martins Parish—
Atchafalaya, Rycade Oil Corp. 1 ..... dry

Wells completed 24
Production 11,154
Dry 17

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Anderson	2	85	1	0	0	1	1
Limestone	2	0	2	0	1	4	5
Navarro	2	0	2	0	0	1	1
Smith	0	0	0	0	1	1	2
Freestone	1	0	1	0	0	0	0
Kaufman	0	0	0	0	0	1	1
Total Feb.	7	85	6	0	2	8	10
Total Jan.	4	125	3	0	0	11	11
Difference	3	40	3	0	2	2	1

WELLS COMPLETED
ANDERSON COUNTY

Smith, Humble O. & R. 1 85
Clemmons, Humble O. & R. Co. 3 ..... dry

LIMESTONE COUNTY

Jackson, Alexander & Liles 1 ..... dry
Richardson, Hicks, Hoover et al 1 ..... dry

NAVARRO COUNTY

Murphy, DeArmond Bros. et al 1 ..... dry
Humphreys, Alexander Liles et al 1 ... dry

FREESTONE COUNTY

Marshall, Roxana Pet. 1 ..... dry

Wells completed 7
Production 85
Dry 6

MISCELLANEOUS
TEXAS

Austin County— —
Raccoon Bend—Gotosky, Humble Oil & Refining Co. 2 300
Brazoria County—
Allen—Allen Bernard, Roxana Pet. 1 .. 29
Allen—Allen, Roxana Pet. Corp. 4 25
Colorado County—
Tanner, Waldvogel et al 1 ..... dry
Fort Bend County—
Long Point—Beard, Gulf Prod. Co. 2-A. dry
Long Point—Trone, Gulf Prod. Co. 6.... dry
Harris County—
Hockley-Tex—Ex. Warren, Humble Oil & Refining Co. 1 ..... dry
Fee, R. S. Griffith 2 ..... dry
Jefferson County—
Big Hill—Staiti, Freeport Sulphur Co. 6 dry
Big Hill—Staiti, Freeport Sulphur Co. 8 dry
Big Hill—Staiti, Freeport Sulphur Co. 10 dry
Liberty County—
Davis Hill—Harvard, The Texas Co. 1.. dry
Washington County—
Konieczny, Pratt Hewlett 2 ..... dry

WEST TEXAS FIELDS

WELLS COMPLETED

County—	Comp.	Prod.	Dry	Gas
Andrews	1	0	1	0
Crane	8	1,775	1	0
Crockett	3	0	1	0
Culberson	1	0	1	0
Fisher	2	280	1	0
Howard	10	4,288	3	1
Jones	5	200	3	0
Mitchell	1	105	0	0
Nolan	2	0	2	0
Pecos	31	129,664	6	0
Reagan	2	35	1	0
Reeves	1	0	1	0
Schoercker County	1	0	1	0
Taylor	1	0	1	0
Upton	1	0	1	0
Winkler	32	86,504	1	0
Total W. Tex., Feb.	102	222,851	25	2
Total W. Tex. Jan..	82	336,962	14	1
Difference	20	114,111	11	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	S.D.	Ttl.
West Texas—				
Crane	2	6	2	11
Crockett	5	4	4	13
Howard	9	25	4	38
Jones	3	2	2	7
Mitchell	..	2	2	4
Pecos	31	28	16	75
Reagan	8	8	10	26
Runnels	5	8	3	16
Upton	4	1	3	8
Winkler	35	92	10	137
Misc. Counties	15	37	41	93
West Texas total, Feb.	118	213	97	428

ANDREWS COUNTY

Cowden, Zweifel & Carter 1 ..... dry
CRANE COUNTY
University-B, Independent O. & G. 2.. 185
University-Hardwicke, Magnolia Pet. 16 300
University, Pecos Oil 15 150
University-D, Simms and Atlantic Oil Prod. Co. 11 50
University, Cromwell et al 15 150
McElroy, Gulf Prod. Co. 46 740
University, Independent O. & G. 2.... 200
University, Humble O. & R. 1 ..... dry

Completions 8
Production 1775
Dry 1

CROCKETT COUNTY

University, W. M. Schaffer 2 ..... dry
H. M. Huff, Simmons et al 1 ..... gas

Completions 2
Dry 1
Gas production 1,000,000

CULBERSON COUNTY

Halford, Jas. M. Gardner 1 ..... dry
FISHER COUNTY
Ligon, Marland Oil and Texon O. & L. 1 dry
D. W. Stephens, The Texas Co. 1-A 280

Completions 2
Production 280
Dry 1

HOWARD COUNTY

Harry Hyman, Lee & Neely 1 ..... dry
Clay, Dixie Oil 1 ..... dry
Gretta Connelly, Marland and Texon 1 dry
Dora Roberts, Magnolia Pet. 6 160
Dora Roberts, Schermerhorn Oil 1-B .. gas
Dora Roberts, Ward Oil 1 100
Dora Roberts, Coyle-Concord Oil 3 50
Sarah Hyman, Magnolia Pet. 4 60
Dora Roberts, Owen & Sloan 2 3744
Dora Roberts, F. H. E. Oil 1-D 174

Completions 10
Production 4288
Dry 3
Gas production 1,000,000

JONES COUNTY

Herndon, Midwest Explto. and Campbell 1 ..... dry
Vestal, Phillips Pet. 2 70
Cason, Swensondale Oil 1 ..... dry
O. H. Pomroy, Phillips Pet. 1 110
W. C. Bennett, W. G. Stough 1 ..... dry

Completions 5
Production 200
Dry 3

MITCHELL COUNTY

W. L. Foster, California Co. 4 105

T. E. Arlege, Winemiller Corp. 1 ..... dry
Longbotham, Zweifel et al 1 ..... dry

Completions 2
Dry 2

PECOS COUNTY

Smith, Humble O. & R. 6 14688
Yates-A, Mid-Kans. and Transcontinental 12 6480
Yates-B, Mid-Kans. and Transcontinental 23 1488
G. A. Harral, Olean Pet. and Altitude Pet. 1 ..... dry
Smith, Roxana Pet. 5 448
Smith, Simms Oil 4 24000
Smith, Simms Oil 5 23664
Smith, Lse. 3, California Co. 6 2160
Smith, California Co. 1 1680
Smith, Gulf Prod. 6 5400
Smith, Gulf Prod. 7 4080
Turney, Kirby Pet. 1 ..... dry
Smith, Mid-Kansas Oil 2 100
Yates Vacancy Strip, Mid-Kansas Oil 13-A 4800
Yates, Mid-Kansas Oil 23-B 62
Yates, Mid-Kansas Oil 24-B 75
Yates, Mid-Kansas Oil 25-B 2035
Alph Harral, Olsen 1 ..... dry
Yates, Sun Oil 1 ..... dry
Sherbine, Geo. Anderson 1 ..... dry
Smith Taylor, Mid-Kansas and Transcontinental 11 10080
Joe Parker, Robert Lee 1 ..... dry
J. H. Tippett, McMann 2 480
Smith-Taylor, Mid-Kansas and Transcontinental 8 3466
I. G. Yates, Mid-Kansas and Transcontinental 20 7200
River Bed, Pandem Oil and Gibson oil 10 1800
M. A. Smith, California Co. 9 2592
M. A. Smith, California Co. 10 4656
I. G. Yates, California Co. 9 1500
I. G. Yates, California Co. 11 5400
I. G. Yates, California Co. 12 1330

Completions 31
Production 129,664
Dry 6

REAGAN COUNTY

University, Henshaw & Camp 1 ..... dry
University, Skelly Oil 1 35

Completions 2
Production 35
Dry 1

REEVES COUNTY

Duff, World Oil 1 ..... dry
SCHEERCKER COUNTY
Luke Robinson, Thomas Gray et al 1.. dry
TAYLOR COUNTY
Sam Hartman, Roeser & Pendleton 1... dry
UPTON COUNTY
C. W. Hobbs, Southern Crude Oil Purchasing Co. 1 ..... dry
WINKLER COUNTY
Ida Hendrick, Southern Crude Oil Purchasing Co., Tract-67-B 1055
Hendrick, Atlantic O. P. Co. 1-E 5342
Hendrick, Independent O. & G. 7-A ... 120
Hendrick, Magnolia Pet. 4 3255
Hendrick, Murchison Oil 3-B 1780
Grisham-Hunter, Republic Oil 1 1674
Hendrick, Texon Oil 1 4300
Hendrick, Turman & Maxwell 1 1577
Hendrick, Pure Oil 2-A 2820
Hendrick, Magnolia Pet. 3 615
Hendrick, Roxana Pet. 1-B 1488
Hendrick, Roxana Pet. 3-C 4553
Hendrick, Southern C. O. P. T-88-C .. 576
Hendrick-E, Atlantic O. P. Co. 1 4612
Hendrick, Humble O. & R. 5 2986
Hendrick, Independent O. & G. 6 1250
Hendrick-C, Roxana Pet. 4 4225
Hendrick, Turman & Maxwell 2 865
Hendrick, Turman & Maxwell 3 2615
Ida Hendrick, Turman & Maxwell 7 2000
Ida Hendrick-B, Atlantic O. P. Co. 1 .. 431
M. J. Bashara, California Co. and Cranfill Bros. 1 ..... dry
Hendrick, Humble O. & R. 1 3279
Hendrick-A, Humble O. & R. 5 4200
Hendrick-B, Humble O. & R. 2 1512
Hendrick-A, Independent O. & G. 6 1200
Hendrick-A, Landreth and Roxana Pet Corp. 3 3124
Hendrick, Magnolia Pet. 4 2500
Hendrick-B, Roxana Pet. Corp. 2 1270
Grisham-Hunter, Roxana Pet. 4 18720
Hendrick, Southern C. O. P. Co. 2 1360
Hendrick, Southern C. O. P. Co. 6 1200

Completions 32
Production 86,504
Dry 1

NORTH CENTRAL TEXAS

WELLS COMPLETED

County—	Comp.	Prod.	Dry	Gas
Archer	23	272	11	0
Brown	36	1,925	17	3
Callahan	8	179	4	1
Coleman	10	723	4	1
Comanche	2	0	2	0
Cooke	4	18	2	0
Eastland	17	3,153	6	3
Grayson	1	0	1	0
Haskell	1	0	1	0
Jack	14	100	11	0
Montague	11	330	4	0
Palo Pinto	1	9	1	0
Shackelford	16	1,493	5	1
Stephens	6	439	3	0
Throckmorton	11	330	4	0
Wichita	57	1,127	14	0
Wilbarger	17	881	5	0
Young	25	327	14	0
Total N. Cen., Feb.	260	11,289	108	9
Total N. Cen., Jan.	179	7,813	83	9
Difference	81	3,476	25	0

Summary of Wells Drilling

County—	Rigs	Drg.	S.D.	Ttl.
Archer	4	14	8	27
Brown	8	38	10	56
Callahan	10	9	8	27
Coleman	1	29	20	50
Cooke	2	4	5	11
Eastland	2	27	4	33
Jack	1	8	9	18
Montague	3	14	2	19
Palo Pinto	..	2	11	13
Shackelford	1	9	4	14
Stephens	1	15	4	20
Throckmorton	..	1	..	1
Wichita	11	23	2	36
Wilbarger	14	36	6	56
Young	6	32	16	54
Misc. Counties	3	11	24	38
North Central Texas totals, Feb.	70	275	128	473
Grand total North Central and West Texas, Feb.	188	488	225	901
Grand total North Central and West Texas, Jan.	210	459	237	906
Difference	22	29	12	5

WICHITA FALLS DISTRICT
COMPLETIONS
ARCHER COUNTY

Young, Burleson & Chenault, 1 ..... dry
Farmer, Carye & Rhacher, 4 35
Hamilton, Long and associates, 1 ..... dry
Farmer, Panhandle & McGregor, 4 35
Farmer, Wilson, 4 40
Hawley, Holcombe & Jones, 1 18
Hawley, Holcombe & Jones, 2 15
Kemp & Kell, Holcombe & Jones, 1 10
Perkins, Rose and associates, 1 ..... dry
Medlin, Stidham & Thrasher et al, 1 ..... dry
Herron, Bowen et al, 1 ..... dry
Farmer, Panhandle & Grisham, 3 12
Gravey-C, Texas Oil Co., 1 ..... dry
Wilson-F, Humble Oil & Refining Co., 1 dry
Carter, Gwynn, 1 ..... dry
Garvey, Roberts Oil Corp., 5 20
Parrish, F. H. Gohlke 1 42
Waggoner, F. C. Greben et al, 1 ..... dry
Kemp-Kell, Holcombe & Jones, 2 12
Andrews, H. M. Kelicher, 1 ..... dry
Perkins, United Producers, 3 12
Burns, Bridwell Oil Co., 1 22
Beckleman Heirs, Vacuum Oil Co., 1 ..... dry

Completions 23
Production 273
Dry 11

COOKE COUNTY

Campbell, W. T. Green and associates, 2 dry
M.K.&T., J. C. McFarland, 2-B 8
M.K.&T., J. C. McFarland, 3 10
Wilson, Hoffer Oil Corp., 1 ..... abn

Completions 4
Production 18
Dry 2

GRAYSON COUNTY

Walls, Simpson-Fell Co., 2 ..... dry
HASKELL COUNTY
Reynolds, Kouri, 1 ..... dry
JACK COUNTY
Snedker, Harper & Buzzard, 1 ..... dry
Welch, Webb & Jordan, 1 ..... dry
Jones Estate, Christie Bros., 3 ..... dry
Ellis et al, J. M. Ellis, Jr., 1 5
Hoefle, Atlantic Oil Producing Co., & Ellis, 1 ..... dry
Wilson, J. T. Owens, 1 ..... dry
G. L. Fry, Amerada Petroleum Co., 1 .. dry
G. L. Fry, Amerada Petroleum Co., 2 .. dry
J. E. Shaw, Amerada Petroleum Co., 1 .. dry
J. E. Shaw, Amerada Petroleum Co., 2 .. dry
Gowdy, W. H. Kerbow et al, 1 ..... dry
Massie, Measure & Poudren, 1 ..... dry
Cullers, Seaboard Oil & Gas Co., 3 45
Cullers, Shaw & Rathke 7 50

Completions 14
Production 100

MONTAGUE COUNTY

Cunningham, Carter & Rycade, 3 94
Howard, Continental Oil Co., 1-A ..... dry
Loy, Pure Oil Co., 3 32
Howard, Bridwell & Heydrick, 1 ..... dry
McGaughy, Bridwell & Heydrick, 4 13
Cunningham, Carter & Rycade Oil Corp., 4 64
Maddox-A, Continental Oil Co., 27 44
Boulden, Oil Operators Trust Co., 3 33
McCall, Benton-Woods et al, 1 ..... dry
Loy et al, Sigler & McGinley, 1 ..... dry
Cunningham, Carter & Rycade Oil Corp., 5 64

Completions 11
Production 330
Dry 4

THROCKMORTON COUNTY

Graham, Falls Production Co., 4 30
WICHITA COUNTY
Warren, W. J. Moran, 14 28
Ferguson, L. P. Hammond, 2 ..... dry
Watkins-A, Magnolia Petroleum Co., 13 24
Beaver-Electra, Perkins & Cullum, 1... dry
W. T. Waggoner, The Texas Co., 343 ... dry
W. T. Waggoner, The Texas Co., 344 ... 3
Kemp & Kempner, Holbrook & Wood, 1 .. 4
Kemp & Kempner, Holbrook & Wood, 2 .. 15
Kemp & Kempner, Holbrook & Wood, 3 .. dry
Kemp & Kempner, Holbrook & Wood, 4 .. 50
Kemp & Kempner, Holbrook & Wood, 5 .. 50
Kemp & Kempner, Holbrook & Wood, 6 .. 20
Kemp & Kempner, Holbrook & Wood, 7 .. 15
Kemp & Kempner, Holbrook & Wood, 8 .. 15
Kemp & Kempner, Holbrook & Wood, 9 .. 12
Kemp & Kempner, Holbrook & Wood, 10 .. 16
Kemp & Kempner, Holbrook & Wood, 11 .. 30
Kemp & Kempner, Holbrook & Wood, 12 .. 5
Kemp & Kempner, Holbrook & Wood, 13 .. 50
Kemp & Kempner, Holbrook & Wood, 14 dry
Kemp & Kempner, Holbrook & Wood, 15 dry
Kemp & Kempner, Holbrook & Wood, 15 dry
Kemp & Kempner, Coleman & Coppock, Lease 4, 1 15
Kemp & Kempner, Coleman & Coppock, Lease 4, 2 10
Kemp & Kempner, Coleman & Coppock, Lease 4, 3 6
Kemp & Kempner, Coleman & Coppock, Lease 4, 4 15
Kemp & Kempner, Coleman & Coppock, Lot 5, 1 10
Kemp & Kempner, Coleman & Coppock, Lot 5, 2 12
Kemp & Kempner, Coleman & Coppock, Lot 5, 3 15
Kemp & Kempner, Coleman & Coppock, Lot 5, 4 15
Kemp & Kempner, Coleman & Coppock, Lot 5, 5 12
Kemp & Kempner, Coleman & Coppock, Lot 4, 1 20
Kemp & Kempner, Coleman & Coppock, Lot 4, 2 5
Kemp & Kempner, Coleman & Coppock, Lot 4, 3 25
Kemp & Kempner, Coleman & Coppock, Lot 4, 4 20
Kemp & Kempner, Coleman & Coppock, Lot 4, 5 12
Kemp & Kempner, Coleman & Coppock, Lot 4, 6 10
Barton, Atlantic Oil Producing Co., et al, 1 60
Yarbrough, Dunaway et al 1 ..... dry
Kemp-Kempner, Grayce Oil Co. & T. H. Cotton, 2 100
Kemp-Kempner, Holbrook & Wood, 8 84
A. J. Schulz, C. H. Lebow, 11 34
W. L. Hodges, O'Donohoe & Gates, 1 ..... dry
Kemp-Kempner, Shappell Oil Co., 12 ... 15
W. T. Waggoner, The Texas Oil Co., 341 dry
Barton, Atlantic Oil Producing Co. et al, 2 100
W. T. Waggoner, Clark et al, 1 21
K.&K.B., Dale Oil Corp., 5 70
Kemp-Kempner, Holbrook & Woods, 1-D dry
Jennings, Jennings & Conyers, 1 34
Watkins-A, Magnolia, 12 ..... dry
Cooper, Chester Everts, 1 ..... dry
Ferguson, L. P. Hammonds, 3 ..... dry
G. R. Hodge, Henry Hobbs, 1 ..... dry
Mrs. G. Jennings, Jennings & Conyers, 1 16
T. L. Burnett, J. C. Jennings et al, 1... 60
Beaver-Electra, Perkins-Cullum, 1-A 22

Completions 57
Production 1137
Dry 14

WILBARGER COUNTY

Waggoner-N, Fain-McGaha Oil Corp., 1 dry
Waggoner-T, Phillips Pet. Co., 1 100
Waggoner-A, Prairie Oil & Gas Co., 7 .. 65
Waggoner-A, Petroleum Producing Co., 2 210
Waggoner-A, Phillips Petroleum Co., 15 15
Waggoner-A, Phillips Petroleum Co., 3.. 33
Waggoner-D, Roxana, Petroleum Corp., 4 90
Waggoner-C, Waggoner Refining Co., 4.. 38
Waggoner-M, Fain-McGaha Oil Corp., 1 150
Waggoner-O, Fain-McGaha Oil Corp., 1 dry
Waggoner-T, Phillips Petroleum Co., 11 70
Waggoner-GG, Phillips Pet. Co., 1 32
Waggoner, Consolidated Oil Co., 1 ..... dry
Waggoner-B, Golding Cockran et al, 1.. dry
Waggoner-C, Milham Corp., 3 ..... dry
Waggoner-NN, Phillips Pet. Corp., 12.. 10
Waggoner-E, Waggoner Refining Co., 3 20

Completions 17
Production 581
Dry 5

YOUNG COUNTY

Donnell, Atkisson & Sandefer, 2 ..... dry
Graham, Lindsley & Boiling, 1 13
Davis, Lyman and associates, 1 ..... dry
Martin, Mann & Forbes, 1 ..... dry
Bower, McCoy and associates, 1 ..... dry
Ware, Mack & Windfohr, 2 15
Hanson, Pitzer & West, 3 15
Morrison-B, Pitzer & West, 3 ..... dry
Morrison, Stovall, 8 33
Langston, Kleiner and associates, 1 .. 30
Waters, Ridgeway, 3 ..... dry
Johnson, Amerada Petroleum Co., 1 ..... dry
McGaghren, Four Oil Co., 3 ..... dry
Jack-C, Rannell Oil Co., 2 90
Morrison, Powell Oil Co., 7 ..... dry
Johnson, Alexander et al, 1 31
Johnson, Pennell et al, 1 ..... dry
Willson, Wichita Production Co., 3 ..... dry
Casey, Williams et al, 1 ..... dry
Johnson, Allday Oil Corp., 1 35
Benson, Bensen Oil Co., 1 ..... dry
T. L. Lisle, Gulf Production Co., 5 35
Hinson, Nash & Windfohr, 3 7
Newman, Parker et al, 1 ..... dry
Howe, Wolfe et al, 1 3

Completions 25
Production 329
Dry 14

RANGER DISTRICT
BROWN COUNTY

Wood, Aldridge, 1 ..... dry

Allcorn, Central Texas Refining Co., 2 .. 85
Kellar, Christie Oil Co., 1 ..... dry
Brown County Fee, Clark & Buffalo Oil Co., 1 240
Murphy, Coals & Walls, 1 ..... dry
Hull, Cranfill & Reynolds, 1 ..... dry
Whitehead, Cranfill & Reynolds, 1 ..... dry
Moran, Forest Oil Co., 1 ..... dry
Hickman, Gilman & McMurray, 2 469
Hickman, Kone Production Co., 9 ..... dry
Collier, Lloyd et al, 1 5
Burris, Mexana Oil Co., 2 ..... dry
Keller, Mitcham, 1 27
Allcorn, Mitchell, 1 ..... dry
Allcorn, Miller, 1 15
Capps, Natural Gas & Fuel Co., 2 ..... gas
Capps, Natural Gas & Fuel Co., 1 ..... gas
Ray, Natural Gas & Fuel Co., 1 ..... gas
Curry, Pandem Oil Co., 2-B 330
Newton, Cranfill & Reynolds 1 72
Curry, M. L. Richards, 1 220
Trueheart, Scrivener et al, 2 10
Kenneay, Texas Fidelity Oil Corp., 1 ..... dry
Newsome, Phillips Pet. Co., 10 125
Curry, Syndicate Oil Co., 1 190
Bush, Syndicate Oil Co., 1 ..... dry
Evans, Van Bibbler & Lehman, 5 2
Curry, Pandem Oil Co., 8 75
Curry, M. L. Richards, 2 30
Boyain, Schuler & Davis, 1 ..... dry
Curry, Syndicate Oil Co., 2 30
Lewis, Taylor et al, 1 ..... dry
Kennedy, Texas Fidelity Oil Co., 1 ..... dry
Mears, Richardson & Hurst, 1 ..... dry
Fuller, Ryan et al, 1 ..... dry

Completions 36
Production 1925
Gas production 1,300,000
Dry 17

CALLAHAN COUNTY

Waller, Bradstreet, 4 125
Hatchett, Gifford, 1 ..... dry
Alvoid, Goodloe & Duffy, 2 ..... gas
Baum, E. E., Mook & Texas Oil Co., 4 .. 4
Wheeler, Young & Alexander, 1 ..... dry
Hatchett, Garner Valley Oil Co., 1 ..... dry
Snyder, Pardee, 1 ..... dry
Long, Prairie Oil & Gas Co., 2 50

Completions 8
Production 179
Gas production 9,000,000
Dry 4

COLEMAN COUNTY

Overall, Anac & Continental Oil Co., 1-D dry
Schirmacher, Coleman Gas Co., 1 ..... gas
Chambers, Shoup, Fr. ..... dry
Babington, Dallas Petroleum Co., 1 15
Story, McCheaney, 1 ..... dry
Breneke, Smith et al, 1 80
Morris, Eastland Oil Co., 1-B 296
Morris, Gwinnup & Bradstreet, 1 42
Stevens, Roth & Faurot, 1 190
Gray, Roxana Petroleum Co., 1 ..... dry

Completions 10
Production 623
Gas 1,000,000
Dry 4

COMANCHE COUNTY

Chapman, Swoveland et al, 1 ..... dry
Barnes, Trojan Oil Co., 1 ..... dry

Completions 2
Dry 2

EASTLAND COUNTY

Fox, Hooser, 7 110
Langust, McGee and associates, 2 ..... gas
Langust, States Oil Corp., 2 8
Collins, Dundell et al, 1 ..... dry
Marshall, Rattlesnake Oil Co., 1 ..... dry
Watson, Root et al 3 20
Casey, Mook & Texas Oil Co., 2-B 140
Hamilton, Shemmeen Production Co., 1 .. 140
Bourland, Teatsorth et al, 1 15
Been, Independent Oil & Gas Co., 1 ..... dry
Thorp, McLester Oil Co., 5 650
Cochran, Texas & Pacific Coal & Oil Co., 1 ..... dry
Roper, Charter Oil Co., 1 ..... gas
Good, Belva Oil Co., 2 1200
Dyer, Moody Corp., 2 ..... gas
Thorp, Root et al, 2 1000
Ramsower, West Adams Pet. Corp., 3 .. dry

Completions 17
Production 3153
Gas production 9,000,000
Dry 5

PALO PINTO COUNTY

Morgan, Orbit Drilling Co., 1 ..... abn

SHACKELFORD COUNTY

Hill, Hughes and associates, 1 ..... dry
Gorsuch, Kingwood Oil Co., 1 10
38-A-60, Roeser & Pendleton & Marland Oil Co. 180
43-A-60, Roeser & Pendleton & Marland Oil Co. 250
51-A-60, Roeser & Pendleton & Marland Oil Co. 240
McLemore, Harris et al, 2 ..... dry
Cook, Roeser & Pendleton, 36-A-60 240
Cook, Roeser & Pendleton, 37-A-60 147
Cook, Roeser & Pendleton, 41-A-60 351
Rugs-Webb, Big State Oil Co., 4 ..... dry
Dillingham, Hughes, 1 ..... dry
Davis, Humble Oil & Refining Co., 4 .. 30
Fukushima, Milham, 1 ..... dry
68-A-60, Roeser & Pendleton & Marland Oil Co. 40
Reynolds, Hope Petroleum Co., 1-26 .... gas
Isbell, Texas & Consolidated Oil Co., 5 .. 5

Completions 14
Production 1493
Gas production 4,000,000
Dry 5

STEPHENS COUNTY

Keel, Pender Production Co., 6 100
Post, Phillips Petroleum Co., 2 ..... dry
Hamil, Hickok Producing Co., 1 210
Cunningham, Mid-Texas Oil Co., 5 120
Langford, McKonnon et al, 1 ..... dry
Andrews, Lyda et al, 1 ..... dry

Completions 5
Production 430
Dry 3

TEXAS PANHANDLE

County—	Comp.	Prod.	Dry	Gas
Carson	1	0	0	1
Gray	14	8,092	0	2
Hutchinson	9	1,122	0	0
Hartley	1	0	1	0
Wheeler	1	0	0	1
Total Pan., Feb.	26	9,214	1	4
Total Pan., Jan.	18	6,690	1	5
Difference	8	2,524	0	1

Summary of Rigs and Wells Drilling

County—	Wells Rigs	Wells Drg.	S.D.	Ttl.
Carson	2	4	1	7
Gray	11	56	8	75
Hutchinson	4	13	3	20
Wheeler County	6	9	2	17
Misc. Counties	3	16	31	50
Total Feb.	26	98	45	169
Total Jan.	45	76	50	171
Difference	19	22	5	2

PANHANDLE COMPLETIONS

CARSON COUNTY

E. S. Polling, Navajo Oil 1 ..... gas

GRAY COUNTY

Bowers, Gulf Production Co., 2 35
Jackson, Operators Oil Co., 1 1000
Jackson, Danciger Oil & Refining Co., 5 .. 1000
Jackson, Danciger Oil & Refining 6 ... 3200
Saunders, The Texas Company, 4 895
Jackson, Danciger Oil & Refining Co., 8 .. 1095
J. M. Shaw, Lefors Petroleum Co., 1 ... gas
J. B. Bowers, Midwest Exploration Co., 1 .. 280
H. M. Davis, Phillips Petroleum Co., 2 .. 200
J. B. Back, Shamrock Petroleum Co., 1 .. gas
W. Jackson, Skelly Oil Co., 2 140
W. Jackson, Delaney et al, 2 45
B. E. McKinney, Gurnsey Oil Co., 2 12
H. M. Davis, Phillips Petroleum Co., 3 .. 200

Production 8092
Wells completed 14
Gas wells 2
Gas production 65,000,000

HUTCHINSON COUNTY

Cockrell, El Rio Oil Co., 1 16
Weatherly, Gray Thompson, 3 25
Johnson Bros., Deal et al, 1 157
Garner, Timms et al, 2 150
Johnson Bros., Empire Gas & Fuel Co., 7 .. 200
Cockrell, First National Oil Co., 2 100
J. M. Sanford, Phillips Petroleum Co., 1 .. 350
E. Cockrell, Ryan Consolidated Co., 1 ... 85
Johnson Bros., Prairie Oil & Gas Co., 53 .. 40

Wells completed 9
Production 1122

HARTLEY COUNTY

J. R. Irving, Eslick et al, 1 ..... dry

WHEELER COUNTY

Binkley & Cain, Watchorn Oil & Gas Co., 2 ..... gas

SOUTHWEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Mirando	10	152	3	4	3	25	28
Luling	3	127	0	0	1	3	4
Kingsville	-	....	..	..	1	3	4
Refugio	12	....	7	5	0	9	9
Adams Field	1	....	0	1	0	1	1
Dale Field	1	150	0	0	0	1	1
White Point	11	....	5	6	4	5	9
Misc.	17	4	15	1	8	76	84
Total Feb.	55	431	30	17	17	123	140
Total Jan.	41	980	25	8	24	151	175
Difference	14	549	5	9	7	28	35

WELLS COMPLETED

Cole Field-Duval—Cole Pet. 50-B .... abd
Houston Oil-Roxana A-3 ..... gas
Houston Oil-Humble 1 ..... gas
Driscoll Pool—R. Driscoll 10-A fee .... gas
Piedras Pintas Dome—Humble O. & R. abd
Wildcats—Milo E. Trussell 1 ..... abd
Randado Field-Jim Hogg—Magnolia Petroleum 34 10
Magnolia Petroleum 33 30

COLE FIELD NO. 2—WEBB

Cole Petroleum 51 110

CAROLINA-TEXAS FIELD

Serna-Forrest ..... gas

Wells completed 10
Oil wells completed 2
Gas wells completed 4
Dry and abandoned 3
Oil production 150
Gas production 125,000,000

LULING FIELD

Magnolia Petroleum—Tiller 11 35
M. W. Koening—Tiller 5 60
Magnolia Petroleum—Stair 16 32

Wells completed 2
Oil wells completed 3
Oil production 127

DALE FIELD

The Texas Company—Lackey 6 150

Wells completed 1
Oil wells completed 1
Oil production 150

REFUGIO FIELD

Houston Oil—Heard 8 ..... gas
Houston Oil—Rooke 4 ..... gas
Houston Oil—Rooke A-2 ..... abd
Houston Oil—Smith Heard ..... abd
Houston Gulf Gas—Tom O'Connor .... gas
Houston Gulf Gas—Fanny Heard 6 .... gas
Houston Gulf Gas—Heard 1 ..... abd
Houston Gulf Gas—Heard 2 ..... abd
Houston Gulf Gas—Heard 3 ..... abd
Houston Gulf Gas—Heard 4 ..... abd
Houston Gulf Gas—Wilson Heard 1 .... abd
Houston Gulf Gas—Fanny Heard 5 .... gas

Wells completed 12
Gassers completed 5
Dry and abandoned 7
Total gas production 200,000,000
(Some of these wells were completed during holidays).

WHITE POINT GAS FIELD

Saxet Oil Co.—Well 2 ..... abd
Saxet Oil Co.—Meaney 2 ..... abd
Saxet Oil Co.—Meaney 3 ..... abd
Saxet Oil Co.—Dunn 4 ..... gas
Mission Drilling—Morris 1 ..... abd
Saxet Oil Co.—Henry 1 ..... abd
Saxet Oil Co.—Rachal 8 ..... gas
Saxet Oil Co.—Rachal 9 ..... gas
Saxet Oil Co.—Rachal 10 ..... gas
Saxet Oil Co.—Rachal 12 ..... gas
Saxet Oil Co.—White Point ..... gas
Saxet Development Co. 2 ..... gas

Wells completed 11
Gas wells completed 6
Dry and abandoned 5
Total gas production 150,000,000
(Some of these wells were completed during the holidays).

ADAMS GAS FIELD

Witherspoon Oil—Nixon 2 ..... gas

Wells completed 1
Gas well completed 1
Total gas production 17,600,000

MISCELLANEOUS

Caldwell County—
The Texas Company—Robuck 1 ..... abd
Charley Hirts—Will Farr 1 ..... abd
Dickinson & Smith—Callahan 1 ..... abd
Brandt et al—Boyd 1 ..... abd

DeWitt County—
McNeil & Matthews—Toland 1 ..... abd

Guadalupe County—
H. H. Temple—McAllister 1 ..... abd

Live Oak County—
Houston Oil—Brown Land & Cattle Co. 2 (Lucas Field) ..... gas
F. A. Lain 1 ..... abd
J. A. Harper—Nichols 1 ..... abd

Medina County—
Chacon Oil Co.—Jungman 1 4
J. A. Swayze—Oeffingers 1 ..... abd

San Patricio County—
Huber & Crawford—Mathis 1 ..... abd
Houston Gulf Gas—Welder 1 ..... abd
Ed. Herwick—Tseemelis 1 ..... abd
Pargee Petroleum—Beall 1 ..... abd
John Sigmund—Robinson 9 ..... abd

Zavala County—
Western Gas & Fuel—West 1 ..... abd

Wells completed 17
Gassers completed 1
Oil wells completed 1
Dry and abandoned 15

ROCKY MOUNTAIN AREA

WYOMING

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Salt Creek	3	211	0	0	5	16	21
Big Horn Co.	4	0	4	0	0	2	2
Carbon Co.	3	0	1	1	0	7	7
Fremont- Converse Co.	1	75	0	0	1	3	4
Fremont Co.	1	0	1	0	1	8	9
Goshen Co.	0	0	0	0	0	1	1
Hot Springs-Washakie	0	0	0	0	0	1	1
Hot Springs Co.	2	100	1	0	0	3	3
Johnson Co.	1	0	2	0	0	3	3
Lincoln Co.	1	0	1	0	0	0	0
Natrona Co.	2	0	2	0	1	2	3
Niobrara Co.	4	0	4	0	2	3	5
Park Co.	0	0	0	0	3	29	32
Platte Co.	0	0	0	0	0	3	3
Sweetwater Co.	0	0	0	0	1	9	10
Sublet Co.	12	242	7	0	1	21	22
Uinta Co.	2	0	2	0	1	3	4
Washakie Co.	2	0	2	0	0	2	2
Weston Co.	0	0	0	0	0	11	11
Total Feb.	33	628	27	1	16	126	142
Total Jan.	9	423	1	1	20	149	169
Difference	30	205	26	0	4	23	27

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Boulder	1	0	1	0	0	5	5
Fremont	5	555	0	0	1	15	16
Larimer	0	0	0	0	3	13	16
Moffat	1	2,000	0	0	10	9	19
Routt	0	0	0	0	0	5	5
Rio Blanco	0	0	0	0	1	3	4
Misc.	1	0	1	0	0	37	37
Total Feb.	8	2,555	2	0	15	87	102
Total Jan.	10	663	2	1	10	83	93
Difference	2	1,892	0	1	5	4	9

NEW MEXICO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Feb.	4	20	2	0	11	91	102
Total Jan.	7	280	3	2	10	90	100
Difference	3	260	1	2	1	1	2

UTAH

Summary of Drilling Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Feb.	0	0	0	0	2	28	30
Total Jan.	0	0	0	0	1	27	28
Difference	0	0	0	0	1	1	2

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	0	0	0	0	0	4	4
Kevin-Sunburst	7	113	5	0	12	18	30
Misc.	2	0	2	0	10	58	68
Total Feb.	9	113	7	0	22	80	102
Total Jan.	11	1,880	4	2	21	73	94
Difference	2	1,767	3	2	1	7	8

WYOMING

WELLS COMPLETED

SALT CREEK

26-40-79 NW, Wyoming Associated 18-L 61
23-40-79 SE, Wyoming Associated 31 .. 35
25-40-79 NW, Midwest Oil Co. 4-L 115

BIG MUDDY

9-33-76 Whiteside, Continental Oil Co. 54 75

OTHERS

29-56-97 Garland, Utah Southern Oil Co. C ..... abd
24-51-93 Torchlight, J. E. Scanlon .... abd
2-56-98 Garland, Allen Oil Co. 1 .... dry
24-56-98 Garland, Jess Crosby et al 1.. abd
7-26-89 Wertz, Producers & Refiners 5 gas
28-26-86 East Ferris, Portland-Wyoming Oil 2 ..... dry
30-1s--2e McGowan, Teton Pet. Co. 1 .. dry
17-46-95 Washakie, Ohio Oil Co. 1 100
34-43-94 Warm Springs, Wyoming-Montana Oil Co. 1 ..... abd
20-48-82 State, Carter Oil Co. 1 ..... Rig removed away
4-43-82 C. L. Sackett et al 1 ..... abd
7-28-111 Elkhorn-Western Slope 1 .... dry
30-39-78 Teapot Oil & Land 2 ..... abd
13-33-80 Wheeler Ranch, Henry Miller 2 ..... dry
7-35-65 Buck Creek Oil Co. 1 ..... abd
36-37-63 State, Buck Creek Oil Co. 1.. ..... Rig removed
17-27-60 Mule Creek, Hollingsworth Bros. 1 ..... dry
13-35-62 Seaman Hills, J. Malcolm 1.. abd
34-27-113 California Pet. Co. 7-G .... dry
26-27-113 Utah-LaBarge Oil Co. 1 .... dry
21-21-113 Midwest Ref. Co. 36 ..... abd
16-27-113 Good & Nutting 1 ..... dry
13-27-113 H. H. Goddard 1 ..... abd
1-28-114 Dry Piney, Utah Oil Ref. Co. 1 11
15-26-113 Rainbow Oil Co. 2-B 135
3-26-113 California Pet. Co. 4 33
27-27-113 California Pet. Co. 3 40
34-27-113 California Pet. Co. 8 33
22-27-113 Akin Butte Oil Co. 2 ..... dry
15-27-113 Denver-LaBarge Oil Co. 1 .... abd
13-46-89 Tenneco, Producers & Refiners 1 ..... dry
5-47-90 Hidden Dome, Ohio Oil Co. 1 ..... Rig removed
6-14-118 Olson & Zimmerman 1 ..... abd
10-14-118 Spring Valley, A. R. Johnson 1 ..... abd

Wells completed 38
Production 628
Gas 25,000,000
Dry and abandoned 27

MONTANA

WELLS COMPLETED

27-35-1 Levnick, Rose Oil Co. 1 ..... dry
28-35-2 Lorensen, Hill-O'Neil 18 ..... dry
7-34-1 Harte, National Oil & Gas Co. 6. dry
13-34-2 Craig, Hardrock Oil Co. 1 75
18-34-1 Skinner, Oil Producers Synd. 3. dry
29-35-3 McNamer, Mill City Oil Co. .... dry
27-35-2 Smoke, California Co. 9 34
9-25-1 State, Dilling et al ..... dry
19-27-2 Reg. Life, Continental Dev. Co. 1 ..... dry

Completed 9
Production 113
Dry 7

COLORADO

WELLS COMPLETED

22-4n-92 Parkinson, Midwest Refining Co. 34-SD 3000
2-19-70 Robbins, Continental Oil Co. 1 60
32-1n-70 Nichols, Repello Oil Co. 1 .... abd
2-19-70 Reinwalt, Bunker Bros. 1 100
28-70-79 Travis, Travis-Raddatz 16 245
2-19-70 Lucas, Continental Oil Co. 1.. 50
21-20-69 Hassel, Mojada Oil & Gas Co. 4 100
24-1s-1e Holly, Eureka Oil Co. 1 ..... abd

Wells completed 8
Production 3555
Dry and abandoned 2

NEW MEXICO

WELLS COMPLETED

24- 7-29 Wells, Ohio Oil Co. 1 ..... dry
3-18-28 State, Levers & Casper 5 10
4-18-27 Mann, R. D. Compton 4 10
15-29-11 Finch, Astec Dev. Co. 1 ..... abd

Wells completed 4
Production 20
Dry and abandoned 2

EASTERN FIELDS

Summary of Completed Wells

Fields—	Comp.	Prod.	Dry	Gas
Allegany	35	45	0	0
Bradford	77	138	0	0
Middle Field	3	6	0	0
Venango-Clarion	10	11	1	6
Butler-Armstrong	7	3	0	5
S. W. Penna	12	9	7	3
West Virginia	57	142	10	34
S. E. Ohio	60	1,776	7	18
Total Feb.	261	2,130	25	66
Total Jan.	252	1,077	34	47
Difference	9	1,053	9	1

Summary of Work Under Way

Fields—	Rigs	Drg.	Ttl.
Allegany	3	20	23
Bradford	25	55	80
Middle Field	0	3	3
Venango-Clarion	1	8	9
Butler-Armstrong	6	8	14
S. W. Pennsylvania	1	28	29
West Virginia	30	91	121
S. E. Ohio	30	60	90
Total Feb.	101	273	373
Total Jan.	89	299	388
Difference	12	27	15

WELLS COMPLETED

ALLEGANY FIELD

Fee, Hugh Flynn Oil 1
Fee, Hugh Flynn Oil 1
Fee, Hugh Flynn Oil 1
Brandell, N. V. V. Franchot 5
Chipmonk, South Penn 1
Kinley, Pure Penn Oil 3
F. D. & B., W. Fitzgerald 1
Garr, Laura H. Garr et al 1
Tract 1, South Penn Oil 47 1
July 2 fee, Forest Oil Corp. 35, Lot 38.. 1
July 2 fee, Forest Oil Corp. 04 ....pressure
July 2 fee, Forest Oil Corp. 08 ....pressure
July 2 fee, Forest Oil Corp. 011 ....pressure
July 2 fee, Forest Oil Corp. 014 ....pressure
July 2 fee, Forest Oil Corp. 015 ....pressure
Boyce & Jordan, L. E. Jordan 5 1
Richardson et al, L. H. Thornton, agt. 1
Fee, Herrick et al 5
Fee, Gorton Bros. et al ..... water
Cleveland, S. J. Cleveland et al 2
G. P. Reid, agt., C. O. & W. O. Taylor 2
G. P. Reid, agt., State Bank Bolivar 24 et al ..... water
Fee, Bradley Prod. Corp. et al 4
Fee, F. L. Putnam et al 1
Fee, MacAdam Oil 1
Fee, C. C. Brennan et al 1
Fee, Cuba Nat. Bank 25 ..... water
Fee, LeSuer Oil Corp. 2
Fee, LeSuer Oil Corp. 2
McDermott, J. K. Cochran et al 2
McDermott, J. K. Cochran et al 2
McDermott, J. K. Cochran et al 1
South Penn Oil Co. et al, First Tr. Co. Wva. 94 1
Fee, J. M. Hughes et al ..... water
Fee, State Bk. Bolivar 40 et al 1

Wells completed 35
Production 45
Pressure and water 9

BRADFORD FIELD

Fee, Pennsylvania Oil Prods. Ref. .... water
Fee, Pennsylvania Oil Prods. Ref. 1
Fee, Geo. W. Smith est. 1
Rounds, J. W. Kaufman 3
Fee, Evans & Wood 4
Fee, Denwood Oil 5
Borden, T. B. Wilson 2

Norton, Kahle Oil 2
Duke, Pennsylvania Pet. 5
Duke, Pennsylvania Pet. 3
Duke, Pennsylvania Pet. 3
Middaugh, A. L. and L. M. Lilly 2
Middaugh, A. L. and L. M. Lilly 2
Borden, T. B. Martin 2
Melvin, South Penn 1
Melvin, South Penn 1
Melvin, South Penn ..... pressure
Duke & Taggart, Luke & Thomas 1
Stinson, W. J. Healey 1
Baldwin, Clara B. Kervin 1
Melvin, South Penn 1
Melvin, South Penn 1
Melvin, South Penn ..... pressure
Jones, South Penn 1
Stinson, W. J. Healy 1
Stinson, W. J. Healy 1
Tract 321, Andrus &McDowell 1
Rew, Bovaird Hamlin 23 1
F. P. Lawton, Esther Oil Inc. 65 2
Bing. 392, Foreper & Elder 29 1
Bing. 428, J. A. Hooper 16 1
Bing. 368, Wilson & Fitzgibbon 21 2
Bing. 490, T. H. Kennedy 458 1
July 4 fee, Forest Oil Corp. 206 1
Tyler fee, Forest Oil Corp. 207 1
Tyler fee, Forest Oil Corp. 81 1
Fisher fee, Forest Pet. Corp. 2-6-20 1
Niles fee, Forest Pet. Corp. 1-K-7 1
Niles fee, Forest Pet. Corp. K-03 ...pressure
Niles fee, Forest Pet. Corp. K-06 ...pressure
Niles fee, Forest Pet. Corp. K-010 ..pressure
Niles fee, Forest Pet. Corp. K-014 ..pressure
Hamlin, South Penn 110 1
Curtis & Imus, South Penn 46 1
Dent, South Penn 118 1
N. W. M. Ex. Co., 2 o-c S. 2. O. 56 1
Curtis & Imus, South Penn 47 1
Bing. 439, South Penn 106 2
Bing. 439, South Penn 107 1
Bing. Satt, South Penn 131 1
Lots 5 and 6, South Penn 54 1
Bing. 533, South Penn 94 1
Culbertson lots, South Penn 69 1
Bing. 408, South Penn 15 1
Tract 27, Hazelwood Oil 141 1
E. J. Burns et al, Bolt & Latimer 4
H. H. Redfield et al, S. P. O. 8
Fee, J. G. McCandless 2
Fee, W. T. Piper et al ..... water
Fee, Howard Wile 1
Fee, Dana & Dana 5
N. V. V. Franchot, T. P. Thompson 2
James W. Leasure, South Penn 2
James W. Leasure, South Penn 2
Bingham; Hazelwood Oil 3
Fee, South Penn Oil 1
Fee, W. C. Kennedy Co. 2
Bingham 179, Hazelwood Oil 1
Fee, South Penn Oil 3
N. W. Min. & Exch., South Penn 2
Bingham 494, South Penn 3
Bingham 533, South Penn 2
Bingham 570, South Penn 3
Fee, South Penn 2
Bingham 439, South Penn 10
Bingham 583, Associated Prod. 5

Wells completed 77
Production 138
Pressure and water 8

MIDDLE FIELD

Williams, South Penn 38 3
Deacon, E. A. Schuetz 1
Lot 420, Sloan & Zook 49 2

Wells completed 3
Production 6

VENANGO-CLARION

Waid, W. F. Whitling 23 2
Corbett & White, Corbett White 9 1
Kellerman, H. B. Melat 24 1

Clarion—

Rowan, C. L. Wedekind et al 5 ..... dry
Howard, George Linn 1 ..... gas
Wentling, Dale, Sheffer, Hook et al 4 .. 1
Wentling, Howard, Stanley & Whitling 4 3
Keating heirs, Freeman, Dittman et al 1 gas
Smith, Affolter, Smith et al 1 2
Campbell, Younkers, Fox et al 1 ..... gas
Groner, S. & G. Gas 1 ..... gas
Sigworth, H. C. Weaver 6, 7 ..... gas

Wells completed 10
Production 11
Dry 1
Gas 6

BUTLER-ARMSTRONG

Hunter Bros., Hunter Bros. 10 2
Maloney, Big Rock Oil 1 ..... gas
Myers, Inpan & Myers J ..... gas
Smith, Dow Smith et al 1
Yeager, J. A. Elliott 1 ..... gas
Woods, McCormick & Ferguson 1 ..... gas
McKinney, Pinkerton & Ferguson 2 ..... gas

Wells completed 7
Production 3
Gas 5

SOUTHEAST OHIO

WELLS COMPLETED
MONROE COUNTY

Stoffle, McMullin & Co. 3 2

PERRY COUNTY

Buckner, Melick, trustee 1 1
Timmons Coal Co., Cline & Co. 3 ..... gas
King, Cline & Co. 1 185
Tague hrs. & Pure Oil Co. 3 2
Fletcher, The Weherle Co. 1 506
Springer, Valley Pet. Co. 1 85
Garllanger, Twin City O. & G. Co. 1 .. gas
Snyder, Snyder Oil Co. 1 80
Gregg, Fairview O. & G. Co. 1 75
Rodgers hrs., Rodgers hrs. 1 ..... dry
Wilson, Wilson Oil Co. 1 ..... gas

HOCKING COUNTY

Mowery, Hope C. & R. Co. 3 ..... gas
H. V. P. Co., Chartiers Oil Co. 209 .... dry
Noble, Gordon Oil Co. 5 12
Duffy, Duffy O. & G. Co. 1 ..... dry
Clark hrs., Clark Oil Co. 1 5

GUERNSEY COUNTY

McCourt, Preston Oil Co. 8 135
Wiggington, Preston Oil Co. 2 60
Fulton, Preston Oil Co. 2 5
Curran, Preston Oil Co. 1 90
Dunning, Blackstone & Co. 1 ..... dry
Ridgely, Pure Oil Co. 4 40

HOLMES COUNTY

Garver, East Ohio Gas Co. 2 ..... gas
Roby, East Ohio Gas Co. 1 ..... gas
Jones, Ohio Oil Co. 1 ..... dry
Schuler, Burtner & Co. 3 50

LICKING COUNTY

Smith, Hope C. & R. Co. 1 45
Hoover Bros., Pure Oil Co. 3 130
Burkholder, M. F. Whitehill 1 ..... gas
Burkholder, M. F. Whitehill 2 ..... gas
McKnight, Hope C. & R. Co. 3 5
Williams, Edmonds & Co. 5 25
Young, J. W. Cashdollar 1 5
Baughman, Brown & Co. 7 20
Miller, Preston Oil Co. 1 5
Prout, Hope C. & R. Co. 1 40
Cotterman, Detex O. & G. Co. 8 3

COSHOCTON COUNTY

Blair, Hope C. & R. Co. 2 5

FAIRFIELD COUNTY

Whitehill, Shenker Bros. & Co. 1 15
Barnes, Hope C. & R. Co. 1 20

MUSKINGUM COUNTY

Sidel, Hope C. & R. Co. 1 3
Morgan, Hope C. & R. Co. 1 100

ATHENS COUNTY

Brown, Bowman O. & G. Co. 1 ..... gas
Hooper, Ronshausen & Co. 2 ..... gas
Williams, The Wehrle Co. 1 ..... gas
State Lands, Athens State O. & G. Co. 10 gas

NOBLE COUNTY

Crock, Wickens & Co. 2 ..... gas

MORGAN COUNTY

Milner, Keller & Co. 32 1
Morris, Cumberland Oil Co. 1 ..... gas

GALLIA COUNTY

Elliott, Preston Oil Co. 1 ..... gas

MEIGS COUNTY

Burdette, Coal Hollow O. & G. Co. 5 .. gas

WASHINGTON COUNTY

McBride, Wilson & Co. 2 4
Reynolds, Todd & Co. 3 ..... dry
Burnette, McVey & Co. 2 2
Vanney, Burton & Co. 2 ..... dry
Wymer, Burns & Co. 6 ..... gas
Breckenridge, Pure Oil Co. 17 ..... gas

JEFFERSON COUNTY

Featner, Featner & Co. 2 25
Cushner, Blackburn & Co. 1 1

Wells completed 60
Production 1776
Dry 7
Gas 18

WEST VIRGINIA

WELLS COMPLETED
LEWIS COUNTY

Lowther, Goodwin Bros. 1 ..... gas

HARRISON COUNTY

Maxwell, West Virginia C. G. Co. 1 ... gas
Evans, Reserve Gas Co. 1 ..... gas

MARION COUNTY

Central Coal Co., Owens B. & M. Co. 1.. gas
Prickett, Mack-Bell O. & G. Co. 1 .... gas

MONONGALIA COUNTY

Tennant, So. P. O. Co. 6 ..... dry

WETZEL AND TYLER COUNTIES

Williamson, Knowlton & Co. 1 4
Antill, Mfrs. L. & H. Co. ..... gas

DODDRIDGE COUNTY

Spurgeon, Ira D. Cox 1 ..... dry
Parsonage lot, George Ahouse 1 ..... dry

RITCHIE COUNTY

Prather hrs., Carnegie Gas Co. 1 ..... dry
Wade, Elder & Co. 1 15
Hickman hrs., Junior Oil Co. 1 ..... dry
Grubb, So. P. O. Co. 1 ..... gas
Mason, So. P. O. Co. 6 2
Wilson, So. P. O. Co. 12 15
Cochrane, J. G. Cochrane 1 40
Grimm, Park Bowser 3 ..... gas

CLAY COUNTY

Samples, Womack & Co. 1 ..... gas
Mulling, So. P. O. Co. 2 ..... gas

GILMER COUNTY

Tierney, James Tierney 3 ..... gas
Wilt, Hope C. & R. Co. 1 5
F. Wilt, Hope C. & R. Co. 1 1
Gainer hrs., Harley Satterfield 11 ..... gas
Despard, Carnegie Gas Co. 1 ..... dry
Clarksburg Mill Co., Pgh. & W. Va. G. Co. 4 ..... gas
Mollhan, Steer Creek O. & G. Co. 2 .. gas

WIRT COUNTY

Vernon-Donoho, W. C. Patterson 32 ... 1

PLEASANTS COUNTY

Hammett hrs., T. C. Hartman 6 ..... dry
Kester hrs., Pickens & Co. 1 5
Sharp, Sharp Farm Oil Co. 2 3

ROANE COUNTY

Connelly, Heck Oil Co. 11 40
Kauffman-Openheimer, G. L. Cabot 1 .. gas

CALHOUN COUNTY

Tippett, Sycamore Fuel Co. 1 10
White, Lewis & Co. 1 ..... gas
Cooper Bros., J. Crowley 1 1
Slider, Smith & Starcher 1 ..... gas

JACKSON COUNTY

Parsons, Ravenwood Co. 1 ..... dry

KANAWHA COUNTY

Updegraff, U. F. G. Co. 1 ..... gas
Whittaker, Meanes Gas Co. 1 ..... gas

LINCOLN COUNTY

Haskinson, Cambridge Gas Co. 1 ..... gas
Woodall, L. R. Sweetland 28 ..... gas
Gillenwater, U. F. G. Co. 18 ..... gas
H. C. Tract, U. F. G. Co. 3 ..... gas
Stone, Pridemore & Adkins 1 ..... gas

MINGO COUNTY

L. C. C. Co., Old Colony O. & G. Co. 29.. dry
Costerman estate, Old Colony O. & G. Co. 19 ..... gas

BOONE COUNTY

Ferrell, Pure Oil Co. 1 ..... gas
Nelson L. & O. Co., Pure Oil Co. 4 ..... gas
Mooney, Boone O. & G. Co. 2 ..... gas
Brown hrs., Columbia Carbon Co. 3 ..... gas

CABELL COUNTY

Hatfield, Aetna O. & G. Co. 2 ..... gas
Lewis, Aetna O. & G. Co. 1 ..... dry
Morrison, W. Va. Corp. 1 ..... gas
Simpson, W. Va. Corp. 1 ..... gas

PUTNAM COUNTY

Morris, Hurricane O. & G. Co. 2 ..... gas
Finley, Tampico O. & G. Co. 1 ..... gas

Wells completed 57
Production 142
Dry 10
Gas 34

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED
WASHINGTON COUNTY

Montgomery, New Oil & Gas Co. 1 .... dry

ALLEGHENY COUNTY

Eisle, Rodgers & Co. 1 ..... dry
Fry, Scott & Co. 1 7

GREENE COUNTY

Fordyce, Carnegie Gas Co. 2 ..... gas
Patterson, Carnegie Gas Co. 1 ..... dry
Lemley hrs., Headley & Co. 3 2
Donham, Garard & Co. 1 ..... dry
Zimmerman, Phila. Gas Co. 1 ..... dry
Yeager hrs., Myers & Long 1 ..... gas
Seales, M. & H. O. & G. Co. 1 ..... dry
Cooper, Boundy Bros. & Co. 1 ..... gas
Ealy, Mfrs. L. & H. Co. 2 ..... dry

Wells completed 12
Production 9
Dry 7
Gas 3

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg	Ttl
Knox	0	0	0	0	2		2
Ashland	5	0	0	5	2	15	17
Medina	3	3	1	1	2	3	5
Lorain	1	0	0	1	0	3	3
Wayne	1	0	1	0	4	4	8
Holmes	3	110	0	2	1	5	6
Coshocton	0	0	0	0	0	5	5
Cuyahoga	9	10	2	5	0	9	9
Guernsey	0	0	0	0	0	6	6
Gallia	1	0	1	0	2	1	3
Starke	0	0	0	0	0	1	1
Fairfield	0	0	0	0	0	1	1
Richland	0	0	0	0	0	1	1
Carroll	0	0	0	0	0	1	1
Summitt	0	0	0	0	0	1	1
Total Feb.	23	128	5	14	11	58	69
Total Jan.	28	353	7	15	12	57	69
Difference	5	225	2	1	1	1	0

WELLS COMPLETED
ASHLAND COUNTY

Hanover—W. B. Cookley, Ohio Fuel Gas 1 ..... gas
S. A. Cline, The Logan Gas 1 ..... gas
Green—Martin Trumpower, The Logan Gas 1 ..... gas
Jacob Kettering, Ohio Fuel Gas 1 ... gas
Troy—R. H. Hartsmiller, Hulse & Kundtz 2 ..... gas

Wells completed 5
Gas 5

MEDINA COUNTY

Lafayette—John H. Grimm, Ohio Fuel Gas 1 ..... gas
Granger—E. M. Ganyard, Empire Gas & Fuel 1 8
Chatham—L. H. and S. E. Brinker, Johnson & McGrath 1 ..... dry

Wells completed 3
Production 8
Dry 1
Gas 1

LORAIN COUNTY

Columbia—G. W. and M. E. Brooks, Empire Gas & Fuel 2 ..... gas

WAYNE COUNTY

Chester—Joseph W. Troxel, The Logan Gas 1 ..... dry

HOLMES COUNTY

Hardy—George Schuler, Burton, Morgan & Co. 3 110
Kilbuck—F. H. & L. E. Garver, East Ohio Gas 2 ..... gas
Richland—Richard Roby, East Ohio Gas 1 ..... gas

Wells completed 3
Production 110
Gas.. 2

CUYAHOGA COUNTY

Strongville—William Loder, Hulse & Kundtz 1 10
Middleburg—Mary Gould, John Arthur 1 dry
Olmstead—A. & A. Dryer, Goff Bros. 1, 2 ..... gas
A. W. Hurd, John Arthur 1 ..... gas
L. S. Tuller, John Arthur 1 ..... gas
L. M. Ames, Hulse & Kundtz 2 ..... gas
A. W. Eldred, Hulse & Kundtz 3 ..... gas
N. J. Paddock, Hulse & Kundtz 1 ..... gas

Wells completed 9
Production 10
Dry 2
Gas 8

GALLIA COUNTY

Lot 463—Emmitt Elliutt, Preston Oil 1 dry

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg	Ttl
Wood	2	0	2	0	2	3	5
Hancock	1	35	0	0	0	2	2
Allen	1	0	1	0	1	1	2
Auglaize	2	15	0	0	1	4	5
Sandusky	2	11	0	0	0	0	0
Mercer	1	0	0	1	0	3	3
Van Wert	0	0	0	0	0	1	1
Seneca	0	0	0	0	0	3	3
Lucas	0	0	0	0	0	1	1
Ottawa	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Darke	0	0	0	0	0	2	2
Hardin	5	0	0	5	0	2	2
Wyandot	3	2	0	1	0	0	0
Total Feb.	17	63	3	7	4	24	28
Total Jan.	11	174	1	3	6	20	26
Difference	6	111	2	5	2	4	2

WELLS COMPLETED
WOOD COUNTY

Plain—A. Sanglier, Lee Rouse 1 ..... dry
H. A. Goodenough, Kundtz & Hulse 1 abd
Troy—A. R. Metzger, Chas. F. Zeising & Co. 1 ..... dry

Wells completed 2
Dry 2
Abandoned 1

HANCOCK COUNTY

Pleasants—J. A. Bryan, Bath Township Oil 8 35
Portage—Jacob Schwab, The Ohio Oil 1, 2, 3, 5 ..... abd

Wells completed 1
Production 35
Abandoned 4

ALLEN COUNTY

Washington—Otto Kaverman, Syl. Metzger 1 ..... dry
American—B. Miller, The Ohio Oil 2, 4, 5, 6 ..... abd
George Knittle, The Ohio Oil 2, 3, 4, 5, 6, 7, 8 ..... abd

Wells completed 1
Dry 1
Abandoned 11

AUGLAIZE COUNTY

Salem—O. F. Benton, Stelzer & Boyd 5 5
Noble—Joe Mallory, The Petroleum Producing 3 10

Wells completed 2
Production 15

SANDUSKY COUNTY

Washington—J. E. Boyer, Lindy Oil 3 .. 8
J. E. Boyer, Lindy Oil 4 3

Wells completed 2
Production 11

MERCER COUNTY

Jefferson—John Karsch, John Karsch 1 gas

HARDIN COUNTY

Forest—Wilmoth, Talbot & Sackett 1 .. gas
Martin Hayes, Talbot & Sackett 1 .. gas
John Stephens, Talbot & Sackett 1 .. gas
McNutt, Kurtz & Co. 1 ..... gas
Dickleman, Kurtz & Co. 2 ..... gas

Wells completed 5
Gas 5

WYANDOT COUNTY

Wharton Field—Kramer, Wharton Oil & Gas 1 1
Andy Wells, Wharton Oil & Gas 1 .. 1
Jacob Kackley, Wharton Oil & Gas 1 gas

Wells completed 3
Production 3
Gas 1

PAULDING COUNTY

Benton—Brady Bros., J. W. McIntosh 1, 2 ..... abd

Abandoned 2

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wells	0	0	0	0	0	1	1
Blackford	0	0	0	0	0	2	2
Jay	1	5	0	0	0	2	2
Grant	0	0	0	0	0	2	2
Huntington	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	2	2
Gibson	2	25	1	0	0	6	6
Pike	2	0	2	0	0	3	3
Daviess	0	0	0	0	0	4	4
Sullivan	3	50	1	1	0	4	4
Vigo	2	105	0	0	0	3	3
Allen	2	0	0	2	2	0	2
Knox	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Johnson	0	0	0	0	3	0	1
Benton	0	0	0	0	0	1	1
Marion	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Martin	1	0	1	0	0	1	1
Monroe	0	0	0	0	0	1	1
Bartholomew	0	0	0	0	0	1	1
Miami	0	0	0	0	0	1	1
White	0	0	0	0	0	1	1
Montgomery	0	0	0	0	0	1	1
LaGrange	0	0	0	0	0	1	1
Wabash	0	0	0	0	0	1	1
Greene	0	0	0	0	0	1	1
Henry	0	0	0	0	0	1	1
Harrison	3	0	1	2	0	2	2
Madison	0	0	0	0	0	1	1
Rush	1	0	0	1	0	0	0
Shelby	1	0	0	1	0	0	0
Total Feb.	18	185	6	7	5	48	53
Total Jan.	17	463	3	0	5	51	56
Difference	1	278	3	7	0	3	3

WELLS COMPLETED
JAY COUNTY

Pike—C. & W. Kemp, Nick Masters 1 .. 5

DELAWARE COUNTY

Delaware—J. E. Goings, J. E. Houke Oil 1, 2, 3, 4, 5, 6, 8 ..... abd
J. E. Goings, No. 2 J. E. Houke Oil 1, 2 ..... abd

Abandoned 9

GIBSON COUNTY

Washington—Catt & Hatfield, William Bell & Co. 1 25
Ed Phillips, Joe S. Young, Jr. & Co. 1 abd
Patoka—Robert Howe, Mauck & Co. 1 dry

Wells completed 2
Production 25
Dry 1
Abandoned 1

PIKE COUNTY

Clay—Robert Hyneman, Mahutska Oil 1 dry
Washington—Preston hrs., G. L. Clark 1 dry

Wells completed 2
Dry 2

SULLIVAN COUNTY

Fairbanks—Dora Williams, Twin Creek Oil 1 50
Gill—Morris Unger, Dome Oil 1 ..... gas
Linton—Mary J. McDonald, J. B. Miller & Co. 1 ..... dry

Wells completed 3
Production 50
Dry 1
Gas 1

VIGO COUNTY

Prairie Creek—W. F. Collins, The Ohio Oil 2 75
William Riggs, Siosi Oil Corp. 8 30

Wells completed 2
Production 105

ALLEN COUNTY

Maumee—Garber, Unknown parties 1 .. gas
Reckaway, Unknown parties 1 ..... gas

Wells completed 2
Gas 2

MARTIN COUNTY

Barket—Luther Hert, B. J. Dunning 1 dry

HARRISON COUNTY

Boone—Lee Estill, Louisville Gas & Electric 1 ..... gas
Chas. Bryant, Louisville Gas & Electric 2 ..... gas
Roy Duggins, Louisville Gas & Electric 2 ..... gas

Wells completed 2
Gas 3

RUSH COUNTY

Rushville—McCoy, T. E. McCoy 1 .... gas

SHELBY COUNTY

Hanover—Belle Linville, Morristown Gas 1 ..... gas

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clarke	1	2	0	0	0	5	5
Cumberland	0	0	0	0	0	2	2
Crawford	2	4	1	0	2	2	4
Lawrence	3	43	0	0	1	2	3
Wabash	6	75	3	1	0	3	3
McDonough	1	0	1	0	0	0	0
Tazwell	1	0	1	0	0	0	0

Marshall	0	0	0	0	0	1	1
Macon	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
St. Clair	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Total Feb.	14	124	6	1	3	20	23
Total Jan.	6	59	2	0	1	24	25
Difference	8	65	4	1	2	4	2

ILLINOIS

WELLS COMPLETED

CLARK COUNTY

Johnson—R. E. Deverick, W. C. McBride Inc. 2 2

CRAWFORD COUNTY

Montgomery—J. D. Reaville, John Phipps 2 ..... dry
Oblong—F. L. Dewey, Dinsmoor Oil 12 4

Wells completed 2
Production 4
Dry 1

LAWRENCE COUNTY

Bridgeport—S. Booe, The Ohio Oil 49 .. 3
Dennison—P. S. VanWay, The Ohio Oil 9 5
L. M. Seed, Big Four Oil & Gas 12 .. abd
Betty—Jesse Douglas, Ohio Oil 1 ..... abd
William Ross, Silurian Oil 6 36

Wells completed 3
Production 43
Abandoned 2

WABASH COUNTY

Wabash—Jesse Cisil, C. E. Bothwell 5 .. dry
S. E. Pritchard, Foreman & Co. 1 .. dry
L. G. Stillwell, Breen Oil 3 45
L. G. Stillwell, Breen Oil 1 ..... abd
V. Jordan, Karns & Co. 1 ..... abd
M. Madden, Adams Corner Oil Co. 14 gas
Friendsville—C. R. Schrader, Miller & Karns 1 30
George Couch, Risley & Co. 1 ..... dry

Wells completed 6
Production 75
Dry 3
Gas 1
Abandoned 2

McDONOUGH COUNTY

Bethel—T. Stoneking, Phil Elting 1.... dry

TAZEWELL COUNTY

Sec. 2-26-3W—Unknown 1 ..... dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Muskegon	1	170	0	0	8	7	15
Saginaw	0	0	0	0	0	2	2
Gratiot	0	0	0	0	0	1	1
Shiawassee	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Charlevoix	0	0	0	0	0	1	1
Midland	0	0	0	0	0	1	1
Roscommons	0	0	0	0	0	1	1
Sanilac	0	0	0	0	0	1	1
Isabelle	0	0	0	0	0	1	1
Alpena	0	0	0	0	0	1	1
Total Feb.	1	170	0	0	8	18	26
Total Jan.	1	20	0	0	3	10	13
Difference	0	150	0	0	5	8	13

WELLS COMPLETED

MUSKEGON COUNTY

Muskegon—Fred W. Figge, Muskogen Oil Corp. 3 170

Rigs

Muskegon—Hartman, Muskingum Dev. 1.
Torrent, Lake Shore Petroleum 1.
Becker Bros., Citizens Petroleum 1.
Margaret Figge, Marie-Caswell 1.
Sec. 4, W. F. Bradley & Son 1.
Sec. 4, Chas. P. Brandt 1.
North Muskegon, Porter, Hill & Co. 1.
Smith, Johnson Oil Refg. 1.

Wells Drilling

Muskegon—Geo. Shoup, J. E. Reed Synd. 1.
Joseph Cihak, Johnson Oil & Ref. 1.
Sec. 4, Muskegon Oil Corp. 1.
Chas. W. Smith, Bowers & O'Keefe 1.
Chas. Raths, Dixie Oil 1.
A. R. Taggart, Unknown parties 1.
Chas. I. Giles, Bull Dog Oil & Gas 1.
Rigs, 8; wells drilling, 7; total, 15.

SAGINAW COUNTY

Wells Drilling

Saginaw—Householder, F. W. Higginbotham, trustee 1.
Chesaning—George Harris, Jack Hendricks 1.
Wells Drilling, 2.

GRATIOT COUNTY

Well Drilling

Elba—S. S. Menter, The Sun Oil 1.

SHIAWASSEE COUNTY

Well Drilling

Near Fairfield—J. A. Walsh 1.

CRAWFORD COUNTY

Well Drilling

Near Grayling—Grayling Dev. 1.

CHARLEVOIX COUNTY

Well Drilling

Near Charlevoix—Trenton, Unknown parties 1.

MIDLAND COUNTY

Well Drilling

Greendale—J. B. Rayner, The Pure Oil 1.

ROSCOMMON COUNTY

Well Drilling

East of Roscommon—Grayling Dev. 1.

SANILAC COUNTY

Well Drilling

Meridian—Sec. 17, Frank Obee 1.

ISABELLE COUNTY

Well Drilling

Chippewa—Sec. 12, J. & S. Dev. 1.

ALPENA COUNTY

Well Drilling

Alpena—Fred M. Potter, William Bradley & Son 1.

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	3	12	1	0	0	7	7
Allen	1	64	0	0	0	11	11
Barren	10	807	0	0	0	24	24
Ohio	31	2,175	7	1	1	54	55
Daviess	11	422	5	0	6	34	40
McLean	1	0	1	0	0	9	9
Hancock	2	25	1	0	1	2	2
Cumberland-Monroe	0	0	0	0	0	2	2
Clinton	0	0	0	0	0	1	1
Butler	0	0	0	0	0	2	2
Hopkins	0	0	0	0	0	1	1
Henderson	0	0	0	0	0	3	3
Muhlenburg	0	0	0	0	0	1	1
Breckenridge	0	0	0	0	0	1	1
Wayne	2	7	0	0	0	3	5
Estill	5	5	2	0	0	3	3
Lee-Owsley	1	50	0	0	0	1	1
Wolfe	0	0	0	0	0	6	6
Johnson-Magoffin	4	41	0	0	0	1	1
Floyd	1	0	0	1	0	2	2
Knox	0	0	0	0	0	4	4
Clay	0	0	0	0	0	1	1
Elliott	1	2	0	0	0	0	0
Total Ky	73	3,610	17	2	8	173	181
Total Tenn.	22	1,165	11	3	0	22	22
Total Miss.	1	0	1	0	9	21	30
Total Ala.	0	6	0	0	0	7	7
Total Fla.	0	0	0	0	0	13	13
Total Feb.	96	4,775	29	5	17	236	253
Total Jan.	58	1,638	17	1	23	219	242
Difference	38	3,137	12	4	6	17	11

WELLS COMPLETED

WARREN COUNTY

Bowling Green—Jas. Beathridge, W. H. Owens & Co. 3 8
H. M. Bryant, Thompson Oil Co. 4
John Richards, the Ohio Oil 1 ..... dry

Wells completed 3
Production 12
Dry 1

ALLEN COUNTY

Gainesville—E. H. Woods, S. W. Lowman 8 64

BARREN COUNTY

Glasgow—C. B. Jones, Sampson Oil 5... 100
Casey Jones, Sampson Oil 6 400
J. W. Pace, Wood Oil 4 200
W. S. Morton, Esslinger Oil 1 5
W. S. Morton, Esslinger Oil 2 5
W. S. Morton, Esslinger Oil 3 50
E. L. Morton, Esslinger Oil 1 2
Walter Browning, Hunt & Co. 5 25
E. Baker, Smith & Snyder 1 5
Howen, Wood Oil 3 15

Wells completed 10
Production 807

OHIO COUNTY

Hartford—V. R. Ferguson, Wood Oil 1.. dry
R. A. Duke, the Wood Oil 2 20
Cora Wells, Mecca Oil 10 150
Hill Rhodes, Daugherty & Co. 6 100
J. S. Bartlett, James C. Ellis 4 ..... dry
J. T. Hoagland, James C. Ellis 1 150
Jane Daniels, James C. Ellis 2 150
Jane Daniels, James C. Ellis 3 100
J. T. Hoagland, James C. Ellis 2 150
W. S. Howard, Joe O'Hair 1 10
Bob Hamilton, Cumberland Pet. 3 319
Bob Hamilton, Cumberland Pet. 4 50
Gilbert Jolly, Jordon, Short & Co. 2 25
Joe Maiden, George Randolph 4 5
Sands, R. P. Rowe & Co. 1 ..... gas
Vincent Steele, Globe Oil Co. 2 ..... dry
Mark Renfrew, Fred Estes & Co. 4 ..... dry
Latney Rhodes, S. H. Russell & Co. 3. 25
A. P. Kelly, S. H. Russell & Co. 5 20
Bartlett heirs, Creek drilling 6 150
Bartlett heirs, Creek Drilling 7 100
Bartlett heirs, Creek Drilling 8 150
Frank Lake, Rex-Pyramid Oil 3 50
Foreman, the Ohio Oil 1 30
Arch Rhodes, the Ohio Oil 2 ..... dry
Don Mitchell, Garrison & Evans 2 5
Thompson Rabbit Ranch, Unknown 1. dry
A. F. Belamy, Deanfield Oil 1 ..... dry
Kelley heirs, J. M. Meredith 1 16
Bob Hamilton, Cumberland Pet. 5 200
C. Hoover, James C. Ellis 1 200

Wells completed 31
Production 2175
Dry 7
Gas 1

DAVIESS COUNTY

Owensboro—Jim Brown, Miller & Damron 1 200
Mattingley, Hupp, Duff & Co. 1 100
John Boby, Leeper Oil 7 50
W. V. Lewis, McMahon & Combs 1 .. 40
Alfred Sutton, Wood Oil 1 30
Hazel Miller Aud, D. J. Bolling & Co. 1 2
Bailey, Noe & Co. 1 ..... dry
Frank Pulliam, Bert Thompson 2 ..... dry
Fred Burns, Sam J. Patrick & Son 1.. dry
McLemore, the Ohio Oil 1 ..... dry
J. W. Woodson, Orville Jenkins 1 ..... dry

Wells completed 11
Production 422
Dry 5

McLEAN COUNTY

Calhoun—P. D. Maddox, Rowe & Randall 1 ..... dry

HANCOCK COUNTY

Pellville—J. B. Taylor, Chicago Petroleum Synd. 1 25
Basham, Wood Oil 1 ..... dry

Wells completed 2
Production 25
Dry 1

WAYNE COUNTY

District 5—J. F. Gregory, J. C. Blair Oil 1 2
J. F. Gregory, J. C. Blair Oil 2 5

Wells completed 2
Production 7

ESTILL COUNTY

District 8—Kate Sawyer, Breaner, Adams & Co. 11 3
J. D. Alexander, Superior Oil Corp. 33 1
J. D. Alexander, Superior Oil Corp 34 dry
Isaac Henry, Wood Oil 6 1
District 7—John Beckley, Levy & Co. 2 dry

Wells completed 5
Production 5
Dry 2

LEE-OWSLEY COUNTIES

District 11—J. P. Fraley, Williamson-Caywood Oil 6 50

JOHNSON-MAGOFFIN COUNTIES

District 27—Lemaster, Henry Lemaster 3 10
District 31—Pierce Bailey, Hupp, Duff & Co. 1 20
Malcomb Whitt, Hupp, Duff & Co. 2.. 5
B. F. Whitt No. 2, Hupp, Duff & Co. 6 6

Wells completed 4
Production 41

FLOYD-KNOTT COUNTIES

District 21—Esther Horton, New Domain Oil & Gas 4 ..... gas

ELLIOTT COUNTY

District 34—Gale Peters, Isom & Peters 1 2

TENNESSEE

CLAY COUNTY

Willow Grove—Joe Murdock, Carnahan Oil 2 960
Joe Murdock, Carnahan Oil 1 70
Celina—B. C. Thompson, McDonnell & Kraft 1 15
C. A. Greenwood, E. A. Brandensberger & Co. 2 40
Davis, Bovard & Shirk 1 5
Rich, Howard, Dooley & Clark 3 30
Tidwell heirs, Clark, Bovard & Shirk 1 25
John Overstreet, Unknown parties 1.. gas
Bob Riley, Ava O. & G. Co. 2 ..... gas
Waddle, Hughes-Rife Synd. 1 ..... dry
Kellsing, J. L. Miller 4 ..... dry
Sidwell, Wittmer Oil & Gas 1 ..... dry
Thos. Long, J. H. McClurkin 1 ..... dry
John Pennington, Thomas Wimmer 1. dry
Robert Clark, Clark & Aber 1 ..... dry

Wells completed 15
Production 1145
Dry 6
Gas 2

OVERTON COUNTY

Near Timothy—Ohio Oil 1 ..... dry
Near Spring Creek—Alexander & Co. 1.. gas

Wells completed 2
Dry 1
Gas 1

PICKETT COUNTY

Juetts Creek—Luther Martin, Bryson & Sinson 1 ..... dry

JACKSON COUNTY

Gainesboro—W. S. Hughes 1 ..... dry
Tom Draper, Pittsburgh Oil & Gas 1.. dry
Lost Branch—W. R. Hawkins, Celina Oil 10 20

TROUSDALE COUNTY

Near Hartsville Road—Ohio Oil 1 ..... dry

BIG CASING RECORD IN PENNSYLVANIA WELL

(Continued from Page 179)

up the hole. In some cases the hole closed enough to stick the tools when pulling out after drilling a screw. The time required to couple and lower the casing past this formation might have been sufficient to allow the hole to bridge and give trouble in lowering the pipe.

In order to overcome these foreseen possible difficulties it was decided to attempt to set the casing in sections, placing the first on bottom and building up to the top of the hole. Such a procedure has several advantages. First, the maximum load that any one joint, thread or collar has to carry is greatly reduced. Second, the maximum weight of the handling equipment is reduced. Third, the first section is landed on bottom with the least delay after the hole has been cleaned of cavings. Fourth, the casing is run through the formations where salting over and caving is most likely to occur, very soon after the hole has been reamed to gauge. Underreaming and cleaning out below suspended casing is in this way eliminated.

Following is the manner in which the casing was set in sections in the Kane deep test:

The first section of 229 feet, weighing 7,700 pounds, was screwed together and lowered to the bottom by means of a specially designed letting-in tool and the drilling cable. The tool was so made that it would not trip until the section had been landed safely on bottom. The second section, 272 feet long, was lowered like the first on the cable except that a different letting-in tool was used. This tool tripped after the two sections had been coupled.

Precautions were taken to guard against the placing of the couplings in any of the known cave holes, gas pocket cavities, or crooks in the hole, in order to keep the section from falling into a cavity.

In all, eight sections ranging from 76 feet to 293 feet, comprising a total length of 1,367 feet, were lowered in this manner. This represented 28 per cent of the entire weight of pipe. The final section of 4,737 feet was run in the regular manner and the coupling made at the top of the short sections. The weight of this long string was partly suspended from the surface.

The longest section lowered on the drilling cable was 293 feet and weighed approximately 5 tons. The cable handled this very nicely with a good factor of safety.

The ideas for casing in this manner, for the letting-in tools, and for the couplings, originated and were developed and built within the company organization.

Accurate information concerning every activity of the Petroleum Industry is becoming more and more valuable. It is absolutely essential to the man who wishes to make a success in the Oil Business.

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for January

Runs

	Month	Dly. Av.
*Prairie Pipe Line Co.	4,495,000	145,000
Gulf Pipe Line Co.	1,286,286	41,493
Texas Pipe Line Co.	1,369,006	44,161
Empire Pipe Line Co.	899,768	29,025
Magnolia Pipe Line Co.	2,127,721	68,636
Cosden Pipe Line Co.	841,638	27,150
*Sinclair Pipe Line Co.	2,619,500	84,500
Oklahoma Pipe Line Co.	3,648,712	117,700
Shell Pipe Line Co.	2,299,738	74,185
*Other lines	4,898,000	158,000
Total January	24,485,369	789,850
Total December	25,634,861	826,931
Difference	1,149,492	36,081

Shipments

Prairie Pipe Line Co.	5,394,759	174,025
Gulf Pipe Line Co.	1,287,671	41,538
Texas Pipe Line Co.	1,025,364	33,076
Empire Pipe Line Co.	965,801	31,155
Magnolia Pipe Line Co.	1,803,315	58,171
Cosden Pipe Line Co.	952,849	30,737
†Sinclair Pipe Line Co.	2,697,287	87,009
Oklahoma Pipe Line Co.	3,398,518	109,630
Shell Pipe Line Co.	2,321,651	74,892
*Other lines	5,580,000	180,000
Total January	25,427,215	820,233
Total December	25,845,087	833,709

Stocks

*Prairie Oil & Gas Co.	32,350,000
*Prairie Pipe Line Co.	2,500,000
Gulf P. L. and Gypsy Oil Co.	10,318,789
The Texas Company	6,426,846
Empire Pipe Line Co.	4,334,405
Cosden Pipe Line Co.	3,350,359
*Sinclair Crude Oil Pur. Co.	21,170,000
Magnolia Petroleum Co.	6,426,846
Oklahoma Pipe Line Co.	2,945,120
Carter Oil Co.	15,404,340
*Other lines	11,750,000
Total January	116,976,705
Total December	116,671,808
Difference	304,897

*Estimated. †Prairie shipments include Texas crude oil and Sinclair shipments include Texas and Wyoming crude oil.

Note: Stocks do not include approximately 7,000,000 bbls. of crude oil held in storage on private tank farms and leases and 1,500,000 bbls. of Texas Panhandle crude oil in storage in Oklahoma and Kansas.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec., '27	Jan., '28
Na.t Transit	135,509.47	150,803.37
S.W. Pa. P.L.	83,623.37	86,787.96
Eureka P.L.	357,137.02	361,589.34
Buckeye P.L. (Macksburg)	317,414.13	342,901.40
Buckeye P.L. (Cleve)	11,590.15	10,402.53
Buckeye P.L. (Lima, etc.)	104,528.08	102,753.20
Indiana P.L.	7,067.60	5,916.95
Cumberland P.L.	226,646.29	224,870.56
N.Y. Transit	22,279.13	21,317.31
Tidewater P.L.	184,686.44	181,415.82
Pure Oil	100,041.39	66,257.89
Emery P.L.	56,312.05	52,122.24
Paragon Dev.	25,971.71	21,188.15
Stoll Oil Ref.	12,870.98	11,710.30
Total	1,645,673.31	1,640,037.52
Daily average	53,088.82	52,904.44

Note—Indian Refining Co. also reported other receipts of 373,857.91 bbls. Paragon Refining Co. had other receipts of 184,101.-91 bbls. Paragon Development had other receipts of 674.91 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec., '27	Jan., '28
Nat. Transit	433,663.76	469,229.36
S.W. Pa. P.L.	374,669.37	359,339.67
Eureka P.L.	194,894.42	187,006.50
Buckeye P.L. (Macksburg)	134,693.87	140,151.88
Buckeye P.L. (Cleve)	1,211.85	1,221.53
Buckeye P.L. (Lima, etc.)	846,994.35	951,977.88
Indaina P.L.	1,153,206.72	1,170,000.62
Cumberland P.L.	144,182.95	118,509.61
N. Y. Transit	141,302.60	128,724.19
Northern P.L.	176,227.13	185,009.92
Tidewater P.L.	155,569.28	153,752.94
Pure Oil	123,788.25	68,558.07
Emery P.L.	56,494.34	55,982.54
Paragon Ref.	150,535.40	142,235.57
Indian Ref.	363,972.95	347,862.85
Paragon Dev.	28,229.67	20,658.67
Total	4,479,636.91	4,540,221.80
Daily average	144,504.42	146,465.22

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of December and January:

	Dec., '27	Jan., '28
Nat. Transit	1,187,950.32	1,149,108.83
S.W. Pa. P.L.	739,481.15	675,945.25
Eureka P.L.	1,702,403.70	1,715,048.80
Buckeye P.L. (Macksburg)	435,355.19	426,940.19
Buckeye P.L. (Cleve)	41,685.80	42,161.59
Buckeye P.L. (Lima, etc.)	4,943,834.32	5,132,654.61
Indiana P.L.	644,480.85	637,623.18
Cumberland P.L.	614,861.45	627,679.02
Southern P.L.	409,639.89	378,610.99
N. Y. Transit	609,588.23	753,445.09
Northern P.L.	537,115.66	547,050.82
Pure Oil	369,284.08	59,565.11
Emery P.L.	11,686.27	7,313.38
Paragon Ref.	15,272.42	16,869.68
Indian Ref.	71,648.15	99,260.00
Paragon Dev.	6,009.77	7,433.22
Total	12,340,297.25	12,276,709.76
Increase	400,556.32	
Decrease		63,587.49

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of December and January, showing the gross stocks of the above fields:

	Dec., '27	Jan., '28
Pennsylvania	4,228,582.93	3,823,756.32
Lima	1,196,691.27	6,186,868.36
Kentucky	1,009,560.04	1,202,935.45
Mid-Continent	5,855,777.40	996,124.21
Illinois	52,685.61	67,025.42
Total	12,340,297.25	12,276,709.76

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1925	1926	1927	1928
Jan.	56,831	55,630	56,209	52,904
Feb.	60,606	60,394	61,298	.....
March	60,575	61,644	63,247	.....
April	63,062	63,019	60,337	.....
May	59,217	60,580	60,284	.....
June	61,270	61,131	62,757	.....
July	62,639	63,206	58,674	.....
August	59,686	61,815	60,870	.....
Sept.	62,510	64,639	60,285	.....
Oct.	145,388	161,132	147,036	.....
Nov.	59,350	61,774	57,275	.....
Dec.	57,974	58,755	53,089	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1925	1926	1927	1928
Jan.	157,889	156,056	141,227	146,465
Feb.	160,862	159,488	138,534	.....
Mar.	154,591	150,239	133,777	.....
April	161,429	152,271	140,227	.....
May	146,995	160,998	144,594	.....
June	149,467	160,257	149,772	.....
July	161,338	160,045	151,850	.....
Aug.	161,730	151,929	188,653	.....
Sept.	156,719	158,915	144,213	.....
Oct.	145,388	161,132	147,063	.....
Nov.	143,582	152,608	150,975	.....
Dec.	150,162	136,428	144,504	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1926	1927	1928
Jan.	9,859,170	9,718,008	13,278,710
Feb.	9,579,264	10,119,162	.....
Mar.	9,438,292	10,794,044	.....
April	9,805,851	11,113,295	.....
May	9,531,767	11,359,381	.....
June	9,586,904	11,493,673	.....
July	9,734,687	11,458,128	.....
Aug.	9,058,947	11,989,115	.....
Sept.	9,436,732	12,212,716	.....
Oct.	9,269,806	12,047,661	.....
Nov.	9,257,067	11,939,740	.....
Dec.	9,454,512	12,340,297	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1926—Runs—Shipments—Stocks.			
1927—			
January	2,641.54	1,470.42	14,374.84
February	2,764.30	1,082.82	15,956.32
March	2,587.20	1,878.56	16,464.96
April	2,834.23	1,512.65	17,986.54
May	2,708.40	539.29	20,315.72
June	2,946.29	664.40	22,497.61
July	3,153.39	1,276.41	24,374.59
August	3,057.89	3,713.11	18,718.37
Sept.	3,309.56	2,656.48	19,372.25
Oct.	2,801.32	1,226.99	20,946.58
Nov.	2,746.50	2,220.53	21,473.05
Dec.	2,779.86	1,893.69	22,388.77
1928—			
January	1,886.06	2,424.79	21,819.91

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, February 1	2,010,925.84
Runs from wells	535,749.34
Other receipts	287,313.10
Regular deliveries	387,645.65
Other deliveries	367,857.01

The amount of Illinois oil run by the Tidewater Pipe Co. in January was 25,990.13 bbls., and deliveries were 46,501.57 bbls. Adding these figures makes the runs and deliveries as follows:

1927—	Runs	Deliveries
January	621,421.03	530,015.91
February	595,831.16	476,950.71
March	737,592.94	554,967.43
April	598,226.97	444,815.49
May	728,758.40	542,192.91
June	640,975.95	532,217.72
July	613,961.30	494,902.51
August	651,276.40	529,331.57
September	619,589.49	432,212.49
October	601,099.25	408,287.53
November	605,621.14	415,136.91
December	577,321.25	397,176.97
1928—		
January	561,759.57	434,147.91

Tidewater Pipe Co., Ltd., also delivered in January, 179,156.56 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
September	23,033	6,967	51,400	14,567	19,533	115,500	.....	.....	.....	.....	.....	115,500
October	20,936	4,356	47,968	14,129	14,387	101,774	.....	.....	.....	.....	.....	101,774
November	9,433	2,833	23,033	15,166	4,933	55,400	.....	.....	.....	.....	.....	55,400
December	10,742	3,033	30,258	24,287	7,065	75,484	.....	.....	.....	.....	3,613	79,097
January	15,387	3,032	31,032	7,452	9,710	66,613	.....	.....	.....	.....	.....	66,613

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

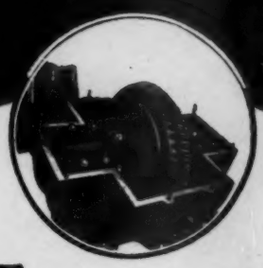
Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
September	28,033	11,433	85,500	12,800	37,700	175,467	5,667	19,233	.....	3,600	28,500	203,967
October	26,064	13,097	79,355	3,838	34,097	156,451	1,613	19,323	806	1,871	23,612	180,064
November	35,233	8,033	84,533	30,100	27,067	184,967	4,000	26,500	2,000	1,667	34,167	219,133
December	39,968	2,387	78,968	19,097	29,826	170,258	2,580	15,356	839	1,226	20,000	190,258
January	15,226	4,323	107,646	27,871	39,774	194,839	5,000	32,516	.....	1,355	38,871	233,710

GROSS PRODUCTION IN UNITED STATES FOR 12 MONTHS (REVISED)

(In Barrels)

1927—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
February:	Month	17,982,711	19,762,348	16,425,416	3,352,076	3,574,256	1,842,400	2,429,864	3,007,200	68,376,271
	Daily average	642,240	705,441	586,622	119,717	127,652	65,800	87,138	107,400	
March:	Month	19,835,724	22,480,921	18,179,491	3,675,143	3,853,920	2,086,108	2,684,724	3,335,800	76,131,831
	Daily average	639,862	726,191	586,435	118,553	124,320	67,294	86,604	105,100	
April:	Month	19,493,825	22,206,130	17,755,920	3,516,930	3,378,240	2,039,550	2,671,830	3,474,000	74,528,435
	Daily average	649,794	740,271	591,864	117,231	112,608	67,985	89,061	115,800	
May:	Month	19,506,054	23,255,462	19,489,607	3,704,314	3,493,669	1,984,651	2,682,151	3,467,000	77,583,909
	Daily average	629,228	750,273	628,697	119,494	112,699	64,021	86,521	111,839	
June:	Month	19,181,442	22,830,330	18,360,450	3,437,580	3,365,760	1,920,180	2,634,570	3,330,000	75,060,313
	Daily average	639,381	761,011	612,015	114,586	112,192	64,006	87,819	111,000	
July:	Month	19,319,021	26,522,546	17,580,348	3,454,082	3,406,683	2,311,019	2,678,679	3,363,300	78,635,679
	Daily average	623,194	855,566	567,108	111,422	109,893	74,549	86,409	108,484	
August:	Month	19,279,131	26,283,350	17,682,927	3,442,240	3,242,600	2,231,202	2,689,021	3,571,000	78,221,471
	Daily average	621,907	847,850	570,417	111,040	104,600	71,974	80,291	115,194	
September:	Month	19,064,500	24,111,660	18,322,800	3,341,340	3,032,970	2,027,070	2,268,630	3,465,000	75,633,970
	Daily average	635,488	803,722	610,760	111,378	101,099	67,569	75,621	111,774	
October:	Month	19,448,893	24,247,053	19,200,093	3,509,169	3,117,298	2,058,889	2,258,885	3,400,000	77,240,285
	Daily average	627,384	782,163	619,358	113,199	100,555	66,416	72,867	109,677	
November:	Month	18,516,467	23,083,380	18,628,290	3,313,650	2,906,760	1,956,960	2,234,730	3,302,500	73,943,737
	Daily average	617,216	769,446	620,943	110,455	96,892	65,232	74,491	110,083	
December:	Month	18,938,823	22,208,417	19,840,095	3,427,174	2,962,760	1,927,148	2,400,578	3,219,900	74,924,795
	Daily average	610,930	716,400	640,000	110,554	95,576	62,166	77,438	103,868	
1928—										
January:	Month	19,026,228	21,146,619	20,023,156	3,319,325	2,791,891	1,839,106	2,429,375	3,133,000	73,710,700
	Daily average	613,814	682,149	645,876	107,075	90,061	59,326	78,359	101,000	2,377,755
	Total 12 months	229,594,819	278,183,217	221,488,512	41,493,023	39,126,797	24,224,283	29,873,037	40,068,700	904,052,393
	Daily average	629,027	762,009	606,819	113,680	107,196	66,368	81,844	109,775	2,476,719

PREPAREDNESS



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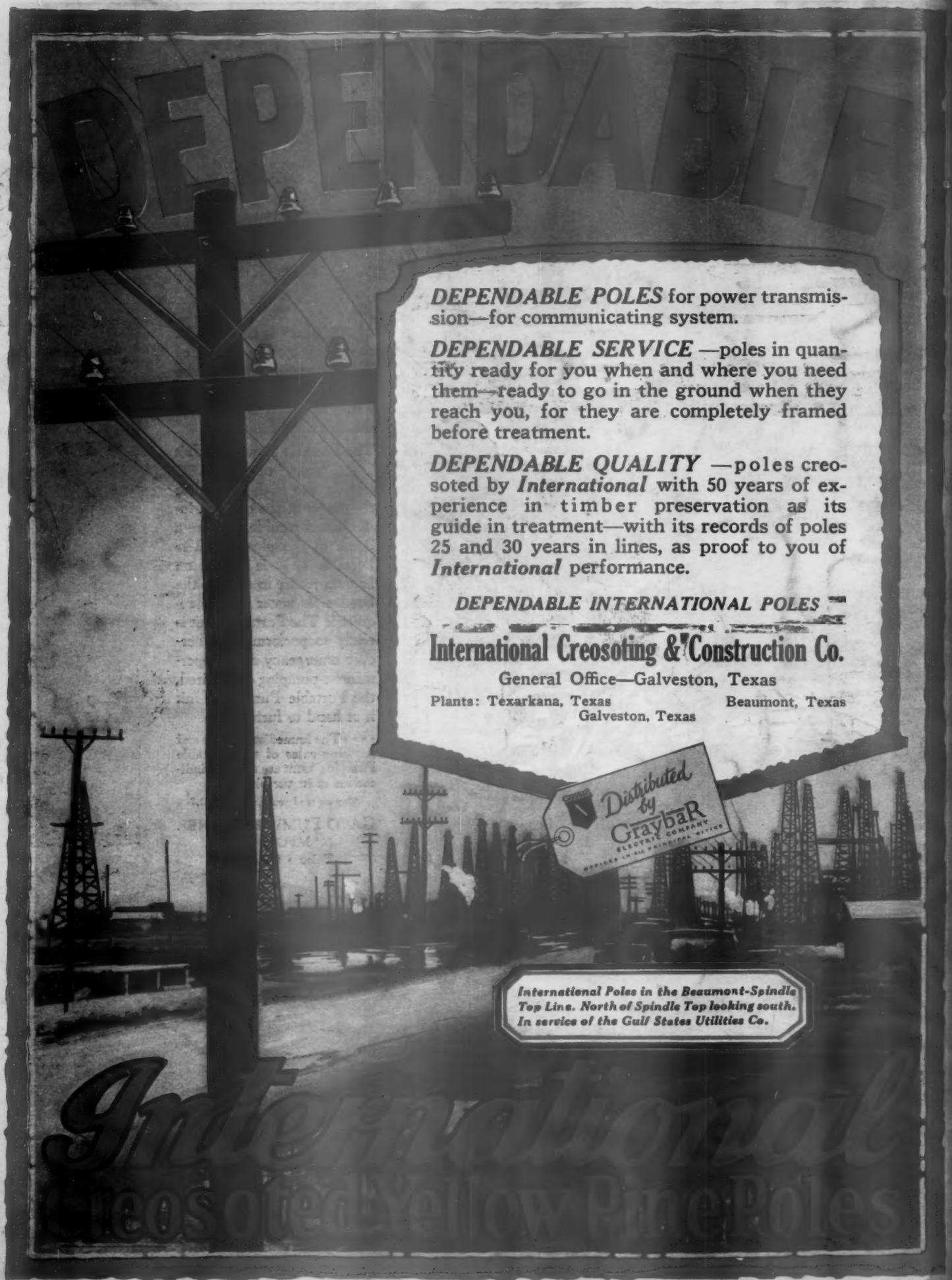
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